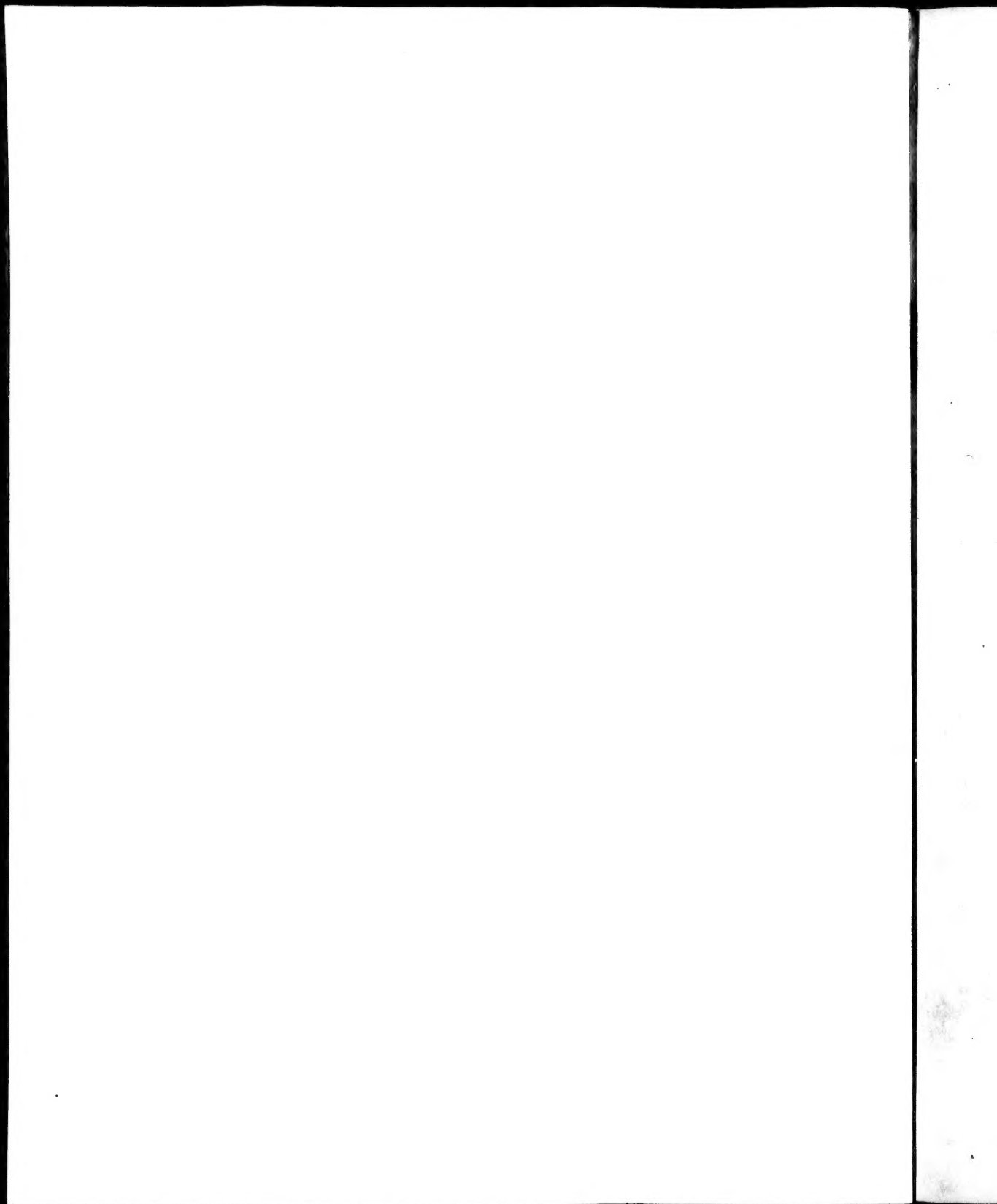




MODERN
GEOGRAPHY.
A
DESCRIPTION

OF THE
EMPIRES, KINGDOMS, STATES, AND COLONIES;

WITH THE
OCEANS, SEAS, AND ISLES;
IN ALL-PARTS OF THE WORLD:
INCLUDING THE MOST RECENT DISCOVERIES,
AND POLITICAL ALTERATIONS.

DIGESTED ON A NEW PLAN.

BY JOHN PINKERTON.

THE ASTRONOMICAL INTRODUCTION
BY THE REV. S. VINCE, A.M. F.R.S.
AND PLUMIAN PROFESSOR OF ASTRONOMY, AND EXPERIMENTAL PHILOSOPHY,
IN THE UNIVERSITY OF CAMBRIDGE.

WITH NUMEROUS MAPS,
REVISED BY THE AUTHOR.

To the whole are added, a Catalogue of the best Maps, and Books of Travels and Voyages,
in all Languages: And an ample Index.

A NEW EDITION, GREATLY ENLARGED.
IN THREE VOLUMES.
VOL. III.—AMERICA AND AFRICA.

LONDON:

PRINTED FOR T. CADELL AND W. DAVIES, STRAND; AND LONGMAN, HURST, REES,
AND ORME, PATERNOSTER-ROW.

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ADDITIONS AND CORRECTIONS. VOL. III.

PAGE 31. Mr. Jefferson, the President of the United States, has, with his usual love of science, promoted an expedition towards the sources of the Missouri, which was undertaken by Messrs. Lewis and Clarke, with about forty attendants. The successful issue may be judged by the following article extracted from the American newspapers.

"Washington, October 27, 1806. It is with the sincerest pleasure that we announce to our fellow-citizens, the arrival of Captain Lewis, with his exploring party, at St. Louis.

"The President of the United States has received a letter from him, dated at St. Louis, Sept. 23, at which place himself, Captain Clarke, and their party, arrived that day. They had passed the preceding winter at a place which he called Fort Claffop, near the mouth of the Columbia river. They set out thence on the 27th of March last, and arrived at the foot of the Rocky Mountains, May 10, where they were detained until June 24, by the snows, which rendered the passage over those mountains impracticable until then. He found it 2575 miles from the mouth of the Missouri to the great falls of that river; thence by land passing the Rocky Mountains to a navigable part of the Kootkookke, 340 miles, of which 200 would admit a good road; and 140 miles over tremendous mountains, which for 60 miles are covered with eternal snows; then 73 miles down the Kootkookke, into a south-eastwardly branch of the Columbia, 154 miles down that to the main river of the Columbia, and then 413 miles to the Pacific, in all 3550 miles from the mouth of the Missouri to the mouth of the Columbia. In this last river the tide flows 183 miles, to within seven miles of its great rapids, and so far, would admit large sloops; and from thence upwards may be navigated by batteaus and periaugurs. He speaks of this whole line as furnishing the most valuable furs in the world, and a short and direct course, for them to the eastern coast of China; but that the greatest part of these would be from the head of the Missouri. He says it is fortunate he did not send back from the head of the Missouri any part of his force, consisting of 31 men; as more than once they owed their lives and the fate of the expedition to their numbers. One man of his party had died before he reached Fort Mandan in 1804; every other one is returned in good health.

"Captain Lewis is expected to remain at St. Louis some days, to settle with and discharge his men, and would then set out for Washington, by the way of Vincennes, Louisville,

Abingdon, Fincastle, Staunton, and Charlottesville. He is accompanied by the great Mandan chief, who is on a visit to Washington. Captain Lewis speaks of his colleague, Captain Clarke, in the most affectionate terms, and declares his equal title to whatever merit may be ascribed to the success of this enterprise."

It needs not be added that the publication of a journey so interesting to geography is earnestly expected.

Page 274. It is said that Velasco, a Spanish commander, having, towards the beginning of the sixteenth century, landed on the coast of Canada, and finding neither men nor metals, he called out *asa nada*, 'there is nothing here,' whence the name of Canada. Others say it is from *Cape di Nada*, 'Cape Nothing' contracted.

Page 533. note * for Uspat, read Uspallata.

Page 638. To the brief account of the volcanoes of Quito might have been added some circumstances from various letters of Humboldt, published in the French journals. In November 1801, he visited, near Popayan, the basaltic mountains of Julufinto, the mouths of the volcano Puracé, which discharge with a dreadful noise the vapours of sulphureous water, and the porphyritic columns of Piché, resembling basalt, with five or seven sides. Pasto stands at the bottom of a terrible volcano, on a table land which may be said to be perpetually frozen. Since the earthquake of 1797 the climate of Quito is so much changed, that, while Bouguer found it 15° or 16° of Reaumur, it is now generally between 4° and 10°; and the earthquakes are alike continual and terrible. The crater of Pichinca, by his account, is a league in circumference, and contains hills whose summits appear to be two or three hundred fathoms beneath the spectator. Humboldt found the height of Chimborazo to be three thousand, two hundred and sixty-seven toises, while Condamine has only computed three thousand, two hundred seventeen. This prodigious mountain, as well as the other chief heights of the Andes, is by Humboldt's description of porphyry from the bottom to the summit, the mass being about nineteen hundred fathoms thick. The bones of the mammoth are found in great abundance, in what is called the Field of the Giants, near Santa Fe, and in many other parts of South America, often at a surprising height in the mountains.

— 649, l. 25. for Audience, read audience.

The typographic errors which do not injure the sense, need not be specified.

MODERN GEOGRAPHY.

A M E R I C A.

Extent.—Origin and Progress of the Discoveries and Settlements.—Population of this Continent.

MANY modern geographers have passed from the description of Asia to that of Africa; while others, after having described these two continents and America, have concluded with Europe. In the arrangement of this work the political importance of the several divisions has been uniformly admitted, as a consideration of great and decisive influence, it being proper that those regions which are most eminent in the course of human affairs should have a preference in rank and delineation. In this point of view no quarter of the world is more insignificant than Africa: and that a considerable part of this last continent was known to the ancients, while on the north were the celebrated nations of the Egyptians and Carthaginians, is an argument merely historical, and which cannot be allowed to preponderate in a system of modern geography. In all future ages America must continue to be regarded as far more important than Africa, in every respect, political or natural: and when to this consideration it is added, that though a part of Africa was well known to the ancients, yet that continent is, upon the whole, far

A M E R I C A.

less known than any other, there is an additional most cogent geographical argument for postponing its description to the last, as has usually been done with regard to countries imperfectly discovered.

These reflections being premised, the next description shall be that of America.

The division of this wide continent into two parts, called North and South America, has not only been in long and general acceptance, but is strongly marked by the hand of nature, in an isthmus more narrow than that which separates Asia from Africa; and by a great diversity in the languages and manners of the original inhabitants. Those authors therefore, however able and ingenious, who have blended all this quarter of the globe in one description, have not only confounded their topics by a heterogeneous mixture, but have sometimes erred as much as if, in an account of Asia, the manners of the Arabs had been confounded with those of the Mandshurs, or the Ostiaks with the Malays. The general consideration of this extensive continent will therefore receive far more clearness and precision when divided into two parts, each forming a separate introduction to the regions about to be described.

According to the arrangement observed in this work, only two topics may be regarded as inseparable from a general view of all America, namely, the extent and population of the whole continent, and the progressive geography, or rather the epochs of the various discoveries.

The southern limit of the American continent is clearly estimated from the strait of Magalhaens, or, according to the French depravation of a Portuguese name, Magellan. But the northern extent is not ascertained with equal precision. If Baffin's bay really exist, the northern limit may extend to 80 degrees, or perhaps to the pole. But amidst the remaining uncertainty, it will be sufficient to estimate the length of America from the 72d degree of north latitude to the strait of Magalhaens, or the 54th degree of south latitude; a space of 126 degrees, or 7560 geographical miles. In South America the greatest breadth is from cape Blanco in the west to that of St. Roque in the east; which, according to the best maps, is 48 degrees, or 2880 g. miles. But in the north the breadth may be computed from the promontory of

Alaska to the most eastern point of Labrador, or even of Greenland, which would add more than a third part to the estimate. In British miles the length of America may be estimated at 8800; and supposing the breadth of North America 3840 g. miles, it will, in British miles, be about 4400.

The first discovery of America is generally ascribed to Christoval Colon, or as commonly called, from the first Latin writings on the subject, Christopher Columbus. But as it is now universally admitted that Greenland forms a part of America, the discovery must of course be traced to the first visitation of Greenland by the Norwegians, in the year 982; which was followed in the year 1003 by the discovery of Vinland, which seems to have been a part of Labrador, or of Newfoundland. The colony in Vinland was soon destroyed by intestine divisions; but that in Greenland continued to flourish till maritime intercourse was impeded by the encroaching shoals of arctic ice. Though the first European colony in America were thus lost, the Danes asserted their right by settlements on the western coast, called New Greenland, to distinguish it from the original colony on the eastern shores, or what is called old Greenland.*

Greenland continued to be well known; and as many English vessels sailed to Iceland in the fourteenth and fifteenth centuries, it is probable that this part of America was not wholly unvisited by them. If the voyage of Nicola Zeno, 1380, be not imaginary, he would also appear to have visited Vinland, but can have added nothing to the Norwegian discoveries.

A work not long since published at Venice, pretends to shew that the West Indies were known before the first voyage of Colon.† This po-

* In 1773 there was published at Boston in New England, a curious pamphlet by Mr. Mather, intitled "America known to the Ancients." The author mentions the ridiculous Welch tale of Madoc 1170, and the voyage of the Zeni in the fourteenth century. To the noted prophecy of Seneca he adds a passage of Nela relative to some Indians driven on the coast of Germany, who were probably Laplanders. The Atlantis of Plato forms another equally cogent argument; and the remainder of the pamphlet is occupied with extraneous matter.

Mr. Mather might have added the Spanish fable, that, A. D. 734, after Spain had been conquered by the Moors, the archbishop of Porto, six bishops, and a number of Christians, fled to the sea of *Antilla*, also called *Septi Ritadi*. See Mr. Murr's Dissertation on the globe of Behaim.

† Saggio sulla nautica antica dei Veneziani; di Vincenzo Formaleoni. Ven. 1783, 8vo.

sition the author attempts to prove from some ancient maps preserved in the library of St. Mark, which appear from repeated inscriptions to have been drawn by Andrea Bianco of Venice, in the year 1436. In these maps many islands are inserted to the west of Europe and Africa, as the Azores, (which seem properly to belong to Europe, the nearest continent,) the Madeira islands, the Canaries, &c.; while at a greater distance, but at no great interval, is placed *Ysola de Antillia*, of considerable extent, but, by a comparative scale, not above 150 miles in length by 50 in breadth. Further to the N. W. is another fabulous island called Delaman Satanaxio, or Satan's-own-hand, an appellation which rivals any since conferred by navigators. This island of Antillia, by its coincidence with the French name Antilles, given to part of the West Indies, has completely embarrassed and misled Formaleoni, who confesses that he cannot conceive whence the term was derived.

A short explanation may serve entirely to obliterate this wonderful discovery. As human follies are generally similar, a recollection of what happened forty years ago, when many philosophers asserted the indispensable existence of a great southern continent, in order to balance Europe and Asia, will serve to illustrate the present subject. The mathematicians and philosophers of the middle ages, in like manner, imagined that some lands were necessary on the opposite part of the globe, to balance the known continents. As these lands were to them wholly imaginary, they were laid down at random; and the very map of Bianco, which gives a kind of oblong square form, of a regularity unknown to nature, is a proof that the whole is ideal. These imaginary lands were, in the middle ages, called *Ante-Insulæ*, or *Antinsulæ*, whence the French Antilles* simply implying *islands opposite to the known continents*; the extent of which latter was, at that period, considered as about a third part of their real size. Hence the reader will immediately per-

* The French alone have retained the old imaginary name, and applied it to the Caribbee Islands: but the Spaniards appear to have led the way in this absurd appellation, and it is a wonder that they did not retain Satan's-own-hand.

The name of *Antinsula* was perhaps originally substituted for that of *Antipodes*, which had been branded by a special papal anathema. From the life of Colon, by his son, it would seem that *Antilla* was originally a Portuguese idea.

ceive that Formaleoni, and many other writers, have, in their inscience of the literature and ideas of the middle ages, asserted as proofs of knowledge what are, on the contrary, proofs of complete ignorance.

The globe of Martin Behaim, 1492, is an interesting monument, as it shews the precise extent of geographical knowledge prior to the first voyage of Colon. Mr. Murr has justly observed that this great navigator could not possibly have derived any intelligence from that globe. From the print which he has published it appears that, beyond the Azores and islands of Cape Verd, Behaim inserted the fabulous Spanish isle of *Antillia*; and beyond this, near the equator, the island of *St. Brandan*, also called *Ima*, a sort of ideal paradise, described in a work of the middle ages, styled the Voyage of St. Brandan, and which is palpably founded upon the belief of the pagan Irish, that, after death, their souls returned to their fathers in a delightful island to the west. After passing the isle of St. Brandan occurs the *Zipangu*, or Japan, of Marco Polo, at nearly an equal distance from St. Brandan as the latter bears from the isles of Cape Verd; for Ptolemy had extended his oriental longitudes to such a surprising degree, that there was little vacancy left on the globe, after laying down at random the discoveries of Marco Polo. Hence when Colon arrived at the West Indies he conceived that he was in the neighbourhood of Japan; and the name of India was imposed in a new and improper sense.

From this brief investigation it will sufficiently appear that there is no room to deprive Colon of one atom of his glory, as Behaim, who was the most complete geographer of his time, evinces that there was no prior discovery, upon the route followed by that great navigator. The discovery of Vinland could scarcely have been known to him: and that of Greenland was so remote, that there was no room for a suggestion that this region formed a part of a prodigious continent.* It will now be proper to state the chief epochs of American discovery.

* In the curious life of Colon by his son Fernando, cap. vi. vii. the reasons are explained which led Colon to suspect the existence of land to the west; that the world was spherical, and might be circumnavigated; the discovery of the Azores, &c. between which and the extreme longitude of Ptolemy there could only be the *third part* of a sphere; the great size of India as described by the ancients, which induced him to think of reaching that country from the west, as Colon imagined that the Hesperides of the ancients must be islands of the East Indies, &c. &c. The discoveries of Marco Polo, and the islands of Antilla and St. Brandan, had also great weight.

A. D. 982. Greenland discovered by the Norwegians, who planted a colony.

1003. Vinland, that is a part of Labrador or Newfoundland, visited by the Norwegians, and a small colony left, which, however, soon perished.

After this there seems a long pause, for no further discovery in America has hitherto been traced, by the utmost exertion of learned research, till the time of Colon. But the Portuguese discoveries in the fifteenth century had gradually enlarged knowledge and encouraged enterprise. The Canary Islands appear to have been faintly known to the Spaniards about the middle of the fourteenth century: and the Normans of France, in the usual enterprising spirit of their progenitors, had made piratical excursions as far as these isles, which were at length completely conquered by a Norman gentleman, Jean de Bethencourt, in 1402, who, by the consent of the Spanish court, assumed the title of king of the Canaries.* Madeira is said to have been discovered by the English in 1344;† but the islands of Cape de Verd seem not to have been known till 1446, nor the Azores till 1449.‡ These last isles, from their position, properly belong to Europe; and the king of Portugal, in 1466, gave them to his sister the Duchess of Burgundy. War and famine then prevailing in Flanders, many people passed from that country to the Azores, among whom was Job de Huerter, lord of Moirkirchen in Flanders, who afterwards resided in Fayal, and appears to have had a grant of the Azores from the duchess of Burgundy. The celebrated geographer Behaim married the daughter of Huerter: by his account, as inscribed on his globe, the Azores were discovered in 1431, and were so named from the numerous goshawks there found. The discovery of these isles, so far to the west, proved an important motive to the further researches of Colon; who was also instigated by the numerous Portu-

* See the very curious history of this conquest, written by his domestic chaplains, and published at Paris 1632, 8vo.

† Bergeron, p. 36. Robertson, *America*, i. 57. says in 1419 by the Portuguese, by whom it was colonized in 1420.

‡ But Murr says that the Azores were explored successively 1432—1419. The chronology of these discoveries would require a dissertation, and an inspection of the Portuguese archives.

guesse discoveries in Africa, where the Cape of Good Hope had been seen by Diaz in 1486.

1492. Colon sails from Spain, in quest of the new world, on Friday the 3d day of August. On the 1st of October he was, by his reckoning, 770 leagues W. of the Canaries. His men began to mutiny, and he was forced to promise to return in three days, if land did not appear. Fortunate presages soon arose, as land birds, a cane newly cut, a carved piece of wood, and the branch of a tree with fresh red berries.* These and other symptoms induced Colon to order the ships to lye to in the evening of the 11th of October, in the certainty of seeing land on the approach of day-light. The night was passed in gazing expectation; and a light having been observed in motion the cry of *land! land!* resounded from the headmost ship. With the dawn of Friday October 12th a beautiful isle appeared, two leagues to the north. *Te Deum* was sung with shouts of exultation, and every mark of gratitude and veneration to the admiral. Colon was the first who landed, to the great astonishment of the natives, who regarded their visitors as children of the sun, the astonishment on both sides being indescribable.

This first discovery of Colon he called San Salvador, but it is now better known by the native name of Guanahani, (the Cat Island of our mariners,) being one of the group called the Bahama isles. Colon soon afterwards discovered Cuba and St. Domingo. After visiting the Azores on his return, he arrived at Lisbon on the 4th of March 1493.

1493. The *second* voyage of Colon, 25th September. Steering more southerly, he discovered several of the Caribbee islands, founded a town in St. Domingo, being the first European settlement in the new world, and did not return till 1496.

1498. *Third* voyage of Colon towards the south-west, where he expected to find the Spice Islands of India. On the 1st of August he discovered an island, which he called Trinidad, not far from the mouth of the river Orinoco. It seems surprising that he did not bend yet further to the south, where he must have fallen in with the main land of America. Yet he judged from the estuary of the Orinoco that this

* Robertson's America, i. 114.

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great river must flow through a country of immense extent; and he landed in several places on the coast of the continent now called Paria. He then returned to Hispaniola or St. Domingo: and in October, 1500, was sent back to Spain in chains!

1499. Ojeda, an officer who had accompanied Colon in his second voyage, sails to America with four ships, but discovered little more than Colon had done. One of the adventurers was Amerigo Vespucci, a Florentine man of science, eminently skilled in navigation, who perhaps acted as chief pilot, an office on such expeditions of high account, and probably only inferior to that of commodore. On his return, Amerigo published the first description that had yet appeared of any part of the new continent: and the caprice of fame has assigned to him an honour above the renown of the greatest conquerors, that of indelibly impressing his name upon this vast portion of the earth. It is idle to accuse his vanity, which never could have established such a claim: it was, on the contrary, the ignorant and thoughtless gratitude of others, which alone could have imposed the appellation, from regard to the first man of letters who had disclosed this discovery to the general eye, as it seems before to have been concealed by jealousy and intrigue; and the name is, at any rate, better than that of New Holland, or New South Wales, assigned in our own most enlightened times: nor do we esteem it any want of gratitude to Cook that no land has yet received its denomination from his name. As the titles of the three other quarters of the world spread, by mere accident, from small districts, so when the name of America was imposed there was not the most distant idea of the prodigious extent of the territory; and it was only understood that this appellation was given to a large island. If any continent were adjacent, it was understood to be the large land of India.*

1500. On his voyage to the East Indies Cabral, the Portuguese admiral, discovers Brazil. This undesigned discovery evinces that, independently of the sagacity of Colon, America could no longer have remained in obscurity.

* In September, 1499, Gama returned to Lisbon, after having visited India by the Cape of Good Hope: on which voyage he sailed July 1497.

1502. *Fourth voyage* of Colon, in which he discovers a great part of the continent, and particularly the harbour of Porto-bello.*

1513. Vasco Nugnez de Balboa descried, from the mountains of the isthmus, the grand Pacific Ocean; and he afterwards waded into the waves, and took possession of it in the name of the Spanish monarch. This discovery seems to have terminated the vain expectation that America formed part of Asia.

It seems unnecessary to trace with minuteness the other epochs of discovery in this quarter. In 1515 the continent was explored as far as Rio de Plata; but even in 1518 little was known concerning its western parts; and twenty-six years had elapsed since the first voyage of Colon, before the existence was rumoured of the empires, or kingdoms, of Mexico and Peru. Hispaniola and Cuba still continued to be the chief seats of the Spanish power. In 1519 Cortez, with eleven small vessels, containing 617 men, proceeds to the conquest of Mexico, which was accomplished in 1521. Magalhaens, at the same time, having explored the Pacific Ocean, the discovery of the western coast of America became a necessary consequence. After many reports concerning the riches of Peru, that country was at length visited in 1526 by Pizarro, in a vessel from Panama. In 1530 the conquest of Peru was begun by Pizarro, at the head of 36 cavalry and 144 infantry: and in ten years that empire was divided among his followers. In 1543 the first Spanish viceroy appeared in Peru.

In NORTH AMERICA the epochs of discovery were more slow.

1497. Giovanni Gaboto, a Venetian, called by the English John Cabot, who had received a commission from Henry VII. in 1495, in the view of tracing a nearer passage to India, discovered Newfoundland, so called by his sailors; and inspected the American shore as far as Virginia: but this land forming merely an obstacle to his wishes, he returned to England. The Sebastian Cabot, who visited Brazil in 1516, was probably the son, and not the brother of this adventurer.

* He was afterwards created duke of Veragua; but died of the gout 20th May, 1506, and was buried at Seville with this inscription:

*A Castilla y a Leon
Nuevo Mundo dio Colon.*

1500. Corte de Real, a Portuguese captain, in search of a north-west passage, discovered Labrador, which he appears to have so called from the seeming industry of the natives.

1513. Florida discovered by Ponce, a Spanish captain.

1524. The powerful kingdom of France had hitherto taken no share in these discoveries: but in this year Francis I. sent Verazano, a Florentine, who examined a great part of the coast of North America.*

1534. Francis I. sending a fleet from St. Maloes, to establish a settlement in North America, Cartier the commander, on the day of St. Lawrence, discovered the great gulf and river to which he gave the name of that saint. In the following year he sailed about 300 leagues up this noble stream to a great cataract, built a fort, and called the country New France.

1539. The Spanish captain Soto proceeded from Cuba to complete the conquest of Florida. He travelled northward to about latitude 35°, but died in 1542, and was buried on the bank of the river Mississippi.

1540. Jean de la Roque, lord of Roberual, a gentleman of Picardy, was appointed lieutenant general of the new lands of Canada, Hochelaga, and Saguenay, who soon returned without success. Roberual again went in 1543. In 1555 the French also attempted a settlement in Brazil.†

1549. Sebastian Cabot was appointed by Edward VI. grand pilot of England, with a considerable pension, for his services in the discovery of America. This Sebastian was probably the son of John Cabot: and respectable descendants of the family still exist in the commonwealth of Massachusetts.*

1562. Ribeaupierre arrived in Florida from France, and returned in 1564: but the colony was destroyed by the Spaniards. Another French commander, Gourgues, revenged the insult, but returned to France in 1568. The industrious and venerable Hakluyt has published the accounts of those French voyages; and though merely a private clergyman, perhaps did more than any potentate to promote a similar spirit in

* Bergeron says that in 1504 the Normans and Bretons already visited the great fishing banks near Cape Breton.

† Bergeron, p. 106.

‡ Morfe, American Geography, 4to. p. 87.

England.

England. The other French voyages during this century were of little moment. In 1591 they discovered some isles near Canada; and in 1598 a lieutenant general was appointed for Canada, Labrador, &c. without effect.⁷ In 1605 Mons visited Canada: Escarbot went thither in 1606. The latter has drawn up a curious history of the French attempts. The Iroquois or Irokis, many of the lakes, &c. &c. were discovered by the French between 1609 and 1620. In 1627 the jesuits repaired to Canada, which afterwards became a firm and flourishing colony.

It will now be proper to consider the progress of the chief settlements.

1576. Frobisher, in search of a N. W. passage, discovered the straits which retain his name.

1578. Sir Humphrey Gilbert obtained a patent for settling lands in America. In 1583 he discovered and took possession of the harbour of St. John, and the country to the south, but was lost on his return.⁸

The voyage of Drake round the world served to kindle the enthusiasm of the English; and Raleigh obtained a patent similar to that of Gilbert.

1584. Two small vessels dispatched by Raleigh unfortunately bent their course to that country now called North Carolina, instead of reaching the noble bays of Chesapek or Delawar. They touched at an island called Wokocon, probably Ocakoki, situated on the inlet into Pamlico Sound; and afterwards at Roanoke near the mouth of Albemarle Sound.* These vessels returned to England, with two of the natives; and Elizabeth assigned to this region the name of Virginia, an appellation which became laxly applied to the British settlements in North America, till it was confined to a different country from the original Virginia.

1585. Raleigh sent a small colony, under the command of Sir Richard Grenville, who settled in the isle of Roanoke, a most inconvenient and useless station, whence they returned in 1586. The account of this settlement, illustrated with excellent prints, was published

⁷ Bergeron, 122.

⁸ Hakluyt.

* Robertson's America, iv. 39. But compare the map by John White, in the curious account of Grenville's expedition, published in English at Frankfort, 1590, folio.

under the auspices of Raleigh;* who made other unsuccessful attempts to colonize the country, and afterwards resigned his patent to some merchants, who were contented with a petty traffic. At the death of Elizabeth, 1603, there was not one Englishman settled in America, and the Spaniards and Portuguese alone had formed any establishment on that vast continent.

The venerable Hakluyt, anxious that his countrymen should partake of the benefit of colonies, procured an association of men of rank and talents for this purpose; and a patent was granted by James I, April the 10th, 1606, that monarch being wholly unconscious that he was about to establish an independent and mighty empire. The bay of Chesapek was discovered in 1607; and the first lasting settlement was founded at James Town, in modern Virginia. Captain Smith, who afterwards published an account of his voyages, displayed remarkable spirit and enterprise: yet the colony was about to return to England when Lord Delawar arrived in 1610; and though he remained only a short time, yet his prudent conduct firmly established the settlement. The subsequent events would be tedious to detail, but the following table, extracted from Mr. Morfe's work, will supply the chief epochs.

NAMES OF PLACES.	WHEN SETTLED.	BY WHOM.
Quebec, - - -	- - - 1608.	By the French.
Virginia, - - -	June 10, 1610.	By Lord Delawar.
Newfoundland, - - -	June, 1610.	By Governor John Guy.
New York, }	- - - about 1614.	By the Dutch.
New Jersey, }	- - -	- - -
Plymouth, - - -	- - - 1620.	By part of Mr. Robinson's Congregation.
New Hampshire, - - -	- - - 1623.	By a small English colony near the mouth of Piscataqua river.
Delawar, }	- - - 1627.	By the Swedes and Finlanders.
Pennsylvania, }	- - -	- - -
Massachusetts Bay, - - -	- - - 1628.	By Captain John Endicott and company.
Maryland, - - -	- - - 1633.	By Lord Baltimore, with a colony of Roman Catholics,

NAMES.

* Plate 2d represents the spot of the settlement on the isle Roanoke, with parts of the adjacent continent called Secotan and Weapemeoc, which now seem to belong to the *Dismal Swamp*; so injudicious was this first settlement. But the book is deeply interesting, as the earliest monument of the English power in America: and it seems to have given rise to the noted Latin Collection of Voyages published by De Bry.

AMERICA.

13

NAMES OF PLACES.	WHEN SETTLED.	BY WHOM.
Connecticut,	1635.	By Mr. Fenwick, at Saybrook, near the mouth of Connecticut river.
Rhode Island,	1635.	By Mr. Roger Williams, and his persecuted brethren.
New Jersey,	1664.	Granted to the Duke of York by Charles II, and made a distinct government, and settled some time before this by the English.
South Carolina,	1669.	By Governor Sayle.
Pennsylvania,	1682.	By William Penn, with a colony of Quakers.
North Carolina,	about 1728.	Erected into a separate government; settled before by the English.
Georgia,	1732.	By General Oglethorp.
Kentucky,	1773.	By Col. Daniel Boone.
Vermont,	about 1764.	By Emigrants from Connecticut, and other parts of New England.
Territory N. W. } of Ohio river, }	1787.	By the Ohio and other companies.
Tennessee on the S. of Kentucky.		

Having thus mentioned the progress of the English settlements, as intimately connected with the discovery of the country, it may be necessary briefly to state the epochs of a few other remarkable discoveries, rather unconnected with these settlements. In 1585 John Davis, an experienced navigator, visited the western coast of Greenland, and explored the narrow sea, absurdly enough called Davis's strait, while it is as wide as the Baltic. On another voyage he proceeded as far north as the island of Disko, and the opposite shores of Greenland, which he named London coast. He also discovered Cumberland strait; and upon the whole the three voyages of this navigator are of great consequence. His furthest point of discovery appears to have been Sanderson's Hope, lat. 72°, whence turning to the west he was impeded by fields of ice.*

In 1607, Hudson made his first voyage; and is said to have proceeded along the eastern coast of Greenland as far as lat 82°, but probably not above lat. 80°, or the furthest extremities of Spitzbergen. On his voyage of 1610 Hudson discovered the straits which bear his name; and that inland sea, approaching the Baltic in size, which has however been called Hudson's Bay.

* See Forster's Voyages and Discoveries in the north, p. 298, &c.

In 1616 some public spirited gentlemen sent Captain Bllot to attempt a N. W. passage. William Baffin sailed with him as pilot: and this voyage is one of the most singular in the whole circle of geography. Far exceeding the utmost stretch of Davis, they discovered Horn Sound, Cape Dudley Diggs, Hakluyt Island, Sir Thomas Smith's Sound, Cary's Islands, Alderman Jones's Sound, and Sir James Lancaster's Sound; all of them totally unknown to any preceding or succeeding navigator. Baffin thus pretended that he had, in an inland and a narrow sea, (which, to increase the absurdity, is laid down in our maps with all its shores, a matter never before attempted from a first and imperfect visit,) proceeded to the latitude of more than 78° , while Captain Cook, the most skilful of modern navigators, could not exceed 72° , in the open arctic ocean, and Davis himself was stopped at 72° , in this very sea, supposed to be inland, while it is probably only part of that ocean. It is further remarkable that this voyage is very imperfectly known from Baffin's relation, published by Purchas; and all the charts and maps of this pretended bay, have been merely laid down from the observations contained in his journal; for if Baffin made any chart it was not published by Purchas. It is perhaps equally remarkable that no doubt seems yet to have been entertained concerning the existence of Baffin's Bay; while it is not improbable that he is merely a bold impostor, who wished to recommend himself to his employers, by the pretence of having imposed their names on grand and important features of nature, and by his numerous *Sounds*, to have laid a scheme for drawing more money from his protectors, for the investigation of a N. W. passage. Yet it would seem that strong doubts prevailed even at the time, for these supposed discoveries were entirely neglected.

Supposing that Baffin's Bay were dismissed from our maps, it is probable that Greenland is a continuation of the continent, and spreads to the W. about lat. 75° ; or it may be detached land, like New Holland, extending towards the pole. The general line of the arctic sea in this quarter, as seen by Mr. Hearne 1772, and Mr. Mackenzie 1789, is about lat. 70° ; and it is not improbable that at a little higher latitude it coalesces with what is called Baffin's bay; in which case Greenland is a

detached land, and the country on the north of Hudson's Bay consists of several large islands in the arctic ocean.

The discoveries of the Russians, and of Cook, and Vancouver, seem to have completed those of the western coasts of America; and the journeys of Hearne and Mackenzie have imparted some idea of its confines on the arctic ocean.

The general population of this immense continent has been a subject of considerable discussion, some having supposed that it amounted to one hundred and fifty millions, while others infer that there are only fifteen millions; and the latter opinion seems to approach nearest to the truth. The ridiculous exaggerations of the old Spanish authors, who sometimes rival Mendez de Pinto, have swelled villages to cities, and thousands to millions. The savages in North America are thinly scattered, as in the extremities of Asia, where a thousand families constitute a nation. An American author, who has examined the subject with some attention, observes that the population of British America does not exceed 200,000; and supposing the savages an equal number, and the inhabitants of the Spanish part of North America * 100,000, these together will amount to half a million. Supposing the United States to have five millions; there will be five millions and a half. The empire of Mexico, (which he ought to have included in North America,) from the enumerations made in some provinces, probably contains four millions of the native race, and about three millions of foreign extract. Hence there are in Mexico seven millions. Peru and Chili can scarcely contain more: and he estimates the other Spanish possessions in South America at two millions, with four millions for Brazil and Paraguay. The other parts are mostly wide deserts; so that he concludes that the inhabitants of South America do not exceed twenty millions; nor those of North America five millions and a half. ¹⁰

As Mexico unquestionably belongs to NORTH America, seven millions, added to five and a half, will yield TWELVE MILLIONS AND A HALF for that division; while SOUTH America, by the same calculation, will contain THIRTEEN MILLIONS. In the opinion of Dr. Stiles

* Florida and Louisiana.

¹⁰ Callender's Key, &c. 1798.

POPULATION.

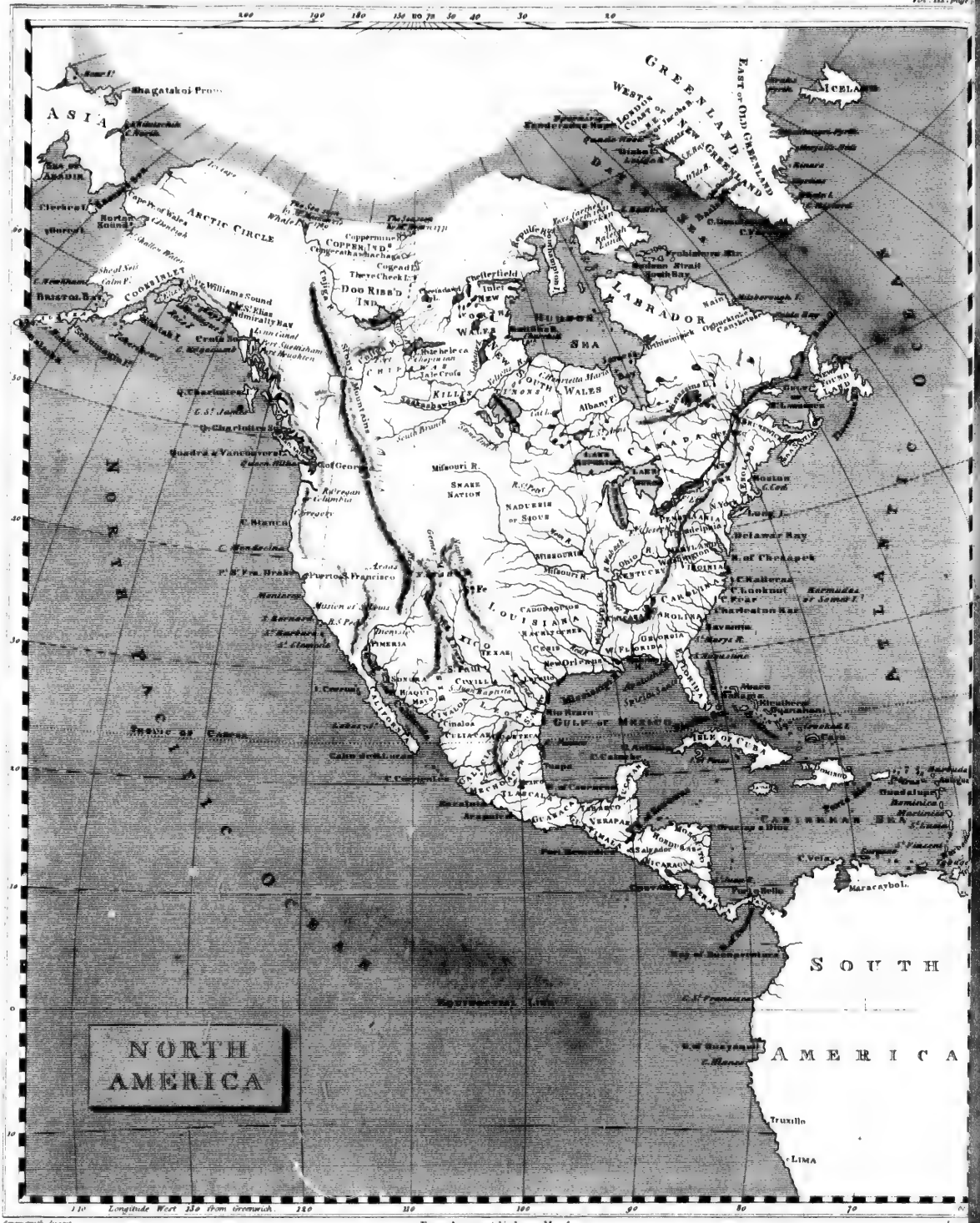
the aboriginal population in all North and South America does not exceed two millions and a half; and it is probable that it never exceeded three millions." Some even infer that fifteen millions form too large an estimate for the whole population of the new continent. Probably the population of Africa, which has in like manner been exaggerated by geographers, does not exceed thirty millions.

Since the publication of this work further considerations have arisen on this important subject. In the account of the Spanish dominions in North America, compiled from the most recent and authentic information, it will be seen that the whole inhabitants of all denominations cannot exceed THREE millions, if an actual enumeration did not reduce them to TWO millions. Hence all North America cannot contain more than EIGHT MILLIONS and A HALF. The settlements in South America are well known to be much less populous than New Spain, so that SIX millions will be found to be a most liberal allowance for that portion.

" Moris, 704.

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Arrowsmith's last

From Arrowsmith's large Map &c

Published March 1st 1802, by Cadell and Davies, Strand; and Longman and Rees, Pall-mall New

NORTH AMERICA.

*Boundaries.—Original Population.—Languages.—Climate.—Inland Seas.—Lakes.
Rivers.—Mountains.*

THIS division of the new continent is bounded on the east by the Atlantic; and on the west by the Great, or Pacific Ocean, On the south it is understood to extend to the vicinity of Panama, the province of Veragua being universally considered as part of North America.* The northern limits have not yet been clearly ascertained; but as it is improbable that a slip of land, on the N. W. of Hudson's Bay, should extend far to the north, the limit may probably be discovered about 74° or 75°. In the mean time 72 degrees may be safely assumed; whence to the southern boundary, about N. lat. 7° 30', as marked in the map of Lacruz, there will be 64½ degrees, or 3870 g. miles; more than 4500 British. The breadth from the promontory of Alaska to the extreme point of Labrador, or the Cape of St. Charles, will, by somewhat of a solecism, exceed the length, which last is however considered as forming part of the length of the general continent. If it should be discovered that Greenland is united to arctic lands of America, as Kamschatka is, for instance, to Asia, both the length and breadth will be greatly increased.

* In the large map of South America, published at Madrid in 1775, by Don Juan de la Cruz, Cano, y Olmedilla, Geographer to his Catholic Majesty, the province of Panama extends to the Bay del Almirante, in the north, and includes the Bay of Panama in the south, Sant Yago, in Veragua, being the first town in North America. According to the maps of Lopez there is a chain of mountains running N. and S. called Sierras de Canatagua, and ending in the point of Higuera; which, dividing the provinces of Panama and Veragua, forms a natural boundary between North and South America.

ORIGINAL
POPULATION.

In pursuing the arrangement of topics, here adopted in the general description of a continent, the first which occurs is the ancient population; but our knowledge of the American languages is still so imperfect that the subject is involved in great doubts. None of the native nations of America displays the smallest trace of the oblique eyes, and other remarkable features by which the inhabitants of eastern Asia are distinguished. Far from this, Pallas, Lesséps, Tooke, and other skilful enquirers, have pronounced that the Techuks, and Koriaks undoubtedly proceeded from America, as they have not one Asiatic lineament.

Language.

It is to be regretted that, neither in North nor South America, have the languages been compared, analysed, and classed, as has been done with regard to the numerous tribes subject to Russia and China. Hence, instead of solid knowledge, we are overwhelmed with petty distinctions, and names without ideas. Upon one point only do investigators seem to be agreed, that the friendly and helpless people in the furthest north, called Iskimos by the German settlers, and in the French mode of spelling Esquimaux, are the same race with the Samoieds of Asia, and Laplanders of Europe. These, with the Peruvians and Mexicans, Dr. Forster chuses to consider as strangers who have settled in America.

The curious question concerning the population of America can only be duly examined after the various dialects have been compared with those of Africa; for to those of Europe, or Asia, they certainly bear no resemblance. To trace the population from the north of Asia,* not to mention the positive contradiction of facts, would be an unnecessary restriction of the subject, as the progeny of so cold a latitude is ever found rare, feeble, and unenterprising; while if we consider the proximity of Africa, and the many copper coloured nations which are there to be found, there will be little reason to hesitate concerning the progress of the Africans to America, as well as to New Holland. This resource alone remains; for it has already been seen that the language of the Malays, who extended themselves so far to the east of Asia, has

* Volney has observed, that he cannot admit the affinities which Dr. Barton wishes to establish between languages on account of the resemblance of two or three words. The ingenious Doctor's theories on this subject seem rather to evince his imagination than his learning.

no connection with that of the Americans. Amidst the wonderful dreams of antiquaries it is surprising that none has attempted to prove that the Mexicans and Peruvians were descendants of the Carthaginians, who fled to the Hesperides in their abhorrence of the Roman yoke. LANGUAGE.

The progressive geography has already been treated under the general head of America. The northern and central parts of this division are still imperfectly known. The number of immense lakes, a singular feature of North America, began gradually to be disclosed by the French, in the 17th century; and the curious reader may trace the progress of their knowledge in the travels of Lahontan. Those of Carver, Hearne, and Mackenzie, have added greatly to former discoveries; but of the western regions little is known, except the shores. Progressive Geography.

The ruling religion of North America is the christian, under various forms in the United States; and Roman Catholic in the Spanish dominions, and among the French of Canada. That of the native nations shall be briefly considered in the account of the chief tribes. Religion.

The climate of North America is extremely various, as may be conceived in a region extending from the vicinity of the equator to the arctic circle. In general the heat of summer, and the cold of winter, are more intense than in most parts of the ancient continent. Near Hudson's Bay Fahrenheit's thermometer has risen in July to 85, and sunk in January to 45 below the cypher: but the mercury begins to congeal at 40, while the spirit of wine will shew 46.* The predominant winds are here from the west; and the severest cold is from the N. W. The middle provinces are remarkable for the unsteadiness of the weather, particularly the quick transitions from heat to cold. Snow falls plentifully in Virginia, but seldom lies above a day or two; yet after a mild, or even warm day, James river, where it is two or three miles in breadth, has in one night been clothed with ice, so as to be passed by travellers. Such surprising alterations seem to proceed from the sudden change of the wind to the N. W. The provinces of South Carolina and Florida are subject to unsufferable heat, furious whirlwinds, hurricanes, tremendous thunder, and fatal lightnings; and the sudden changes of the weather are alike pernicious to the human frame. A Climate.

* Pennant, A. Z. ccxxx.

CLIMATE. violent tuffoon happened near Charlestown in 1761, appearing like a column of smoke, with a noise like thunder, ploughing the very beds of the rivers, and diffusing universal destruction throughout its progress.

Few opportunities have yet arisen for accurate accounts of the climate, in the western parts of North America. That of California seems to be in general moderate, and pleasant, though somewhat incommoded by the heat of summer. In lat. 59° the land has a most barren and wintry appearance, even in June: the gloom is increased by frequent fogs, and the glaciers seem perpetual.²

Inland Seas. Among the inland seas of North America may be mentioned the gulfs of Mexico, California, and St. Lawrence; with Hudson's Bay, or rather Hudson's Sea,* and what is called the strait of Davis, which is probably a sea of communication between the Atlantic and the arctic oceans. The existence of Baffin's Bay is doubtful, as already shewn; but there are several lakes of so great a size that they deserve to be distinguished by the name of seas, particularly Lakes Superior, Michigan, and Huron, which constitute one piece of water, about 350 miles in length; and the great Slave Lake in the north is laid down as about 220 B. miles in length. In Asia no hesitation has been shewn by geographers, in applying the name of Sea to the lake of Aral, which is about 200 miles in length; and the sea of Baikal about 350. But the latter is not above 35 miles in breadth, while the lake Superior is more than 100.

Gulf of Mexico.

Of all these seas the gulf of Mexico is the most celebrated, as lying in a most favourable climate, and presenting at its entrance that grand archipelago of North American islands called the West Indies. From this gulf a singular current sets towards the N. E., this current called the gulf stream passes to the banks of Newfoundland, and is supposed to proceed from the accumulation of waters by the trade wind. It is sometimes distinguished from other parts of the ocean by the gulf weed; is

² La Perouse, ii. 67.

* The Bay of Biscay and that of Bengal may perhaps authorize the received appellation; but these seas should rather be called seas or gulfs, if there were any uniformity in geographic terms.

eight or ten degrees warmer; of an indigo blue; never sparkles in the night; and when it arrives in cool latitudes produces thick fogs;* The trade wind, or diurnal sea breeze, is from the east, and its collateral points, with little intermission, for nine months of the year. To the south of the gulf of Mexico is the Bay of Honduras, well known in the annals of English commerce. The Caribbean sea may perhaps more properly be considered as belonging to South America.

INLAND
SEAS.

The opposite shore presents the gulf of California, which seems an estuary of two large rivers. The jealous silence of the Spaniards concerning their American possessions affords but few materials for a proper illustration of their geography. The gulf of St. Lawrence is the well known estuary of a river of the same name, generally frozen from December to April. This noble gulf is closed by the island of Newfoundland, and by numerous sand-banks, particularly what is called the Great Bank. This celebrated fishing station is more than 400 miles in length, by about 140 in breadth; the water being from 22 to 50 fathoms, with a great swell, and frequently a thick fog. The chief fishery begins on the 10th of May, and continues till the end of September, the greatest number of cod fish, taken by a single fisherman, being twelve thousand, but the average is seven thousand: the largest fish was four feet three inches in length, and weighed forty-six pounds. More than 500 English vessels commonly fish on the bank; and the number used sometimes to be equalled by that of the French, who had formerly a settlement in the neighbouring isle of Cape Breton.

Fishing
Banks.

There are also great fisheries on the banks which lye off the coasts of Nova Scotia, particularly on that called Saddle Island Bank, or rather from the French *Sable*, the Isle of Sand, which is in the shape of a bow, about eight leagues in length, with a narrow pond of sea water in the middle, filled every tide by a narrow inlet.

Hudson Sea may be considered as extending from the entrance of Hudson Strait, to its western extremity, that is from long. 65° W. to

Hudson Sea.

* Mr. Ellicott thinks that the gulf stream is caused by a circular motion of all the Atlantic; for if it were occasioned by the trade winds the water would fall back during the frequent calms, p. 262. but this is doubtful, as the calms are not equal to the duration of the winds, and the impulse still remains.

² Pennant, A. Z. cccvii.

long.

INLAND
SEAS.

long. 95°, or thirty degrees of longitude, which in lat 60° will be 900 g. miles, or about 1050 British, exceeding the Baltic in length as well as breadth. The shores are generally rocky and precipitous, and the climate almost the perpetual abode of winter, the hot weather in June being brief though violent. This sea is far from abundant in fish, but the common whale is found; and the Beluga, or white whale, is taken in considerable numbers in June, when the rivers in the south have discharged their ice. Large sturgeons are also caught near Albany. Shell fish are extremely rare, common muscles alone being frequent. The large track of territory on the south of this sea is the property of the Hudson's Bay Company, whose chief profits are derived from furs. This sea has been repeatedly explored for a N. W. passage, perhaps as little to be expected as a passage from the Baltic into the Arctic ocean, or the Euxine. Chesterfield inlet is a singular strait stretching far to the west, but terminates in a magnificent lake of fresh water, communicating with this sea by what may be called a broad river; the adjacent land being level, rich in pasture, and abounding with deer.* But it is probable that in the N. E. Hudson Sea opens into the Arctic ocean, where the perpetual ice presents a complete barrier to commercial views.

Davis.

The Gulf, or Sea of Davis may be considered as part of the Sea of Hudson, and probably joins the Arctic ocean. What is called Baffin's Bay is laid down as extending from 46° W. long. to 94°, which, supposing the degree only 16 g. miles, would yield a length of 768 g. miles; and the breadth on the west side is represented as little inferior. As this sea is perhaps wholly imaginary, it is unnecessary to enlarge on the subject: and it shall only be observed that the west coast of Greenland has not been explored beyond lat. 72°, or Sanderson's Hope, and an old Danish settlement called Opernevig. In the midst of Baffin's Bay many maps present a large tract called James Island, which perhaps is a promontory passing from Greenland.*

As in the general description of Asia not only the Caspian Sea, but those of Aral and Baikal have been commemorated, so the vast

* Pennant, A. Z. ccxcv.

• It is rather a large isle in the north of Hudson Sea, laid down from erroneous observations.

lakes, above-mentioned, may here be considered as detached inland INLAND SEAS. seas.

The lake Superior, Michigan, and Huron, in this point of view, LAKES. Sea of Canada. form one large inland sea, which might be called the sea of Canada, or that of Huron. This expansion of water, as already mentioned, is about 350 miles in length, and more than 100 at its greatest breadth: according to the French charts that part of this sea, which is called Lake SUPERIOR, is not less than 1500 miles in circumference. The greater part of the coast seems to consist of rocks and uneven ground, like those of the sea of Baikal. The water is pure and transparent; and the bottom generally composed of large rocks. There are several islands, one of which called Minong is about 60 miles in length: the savages suppose that these islands are residences of the Great Spirit. More than thirty rivers fall into this lake, some of them of considerable size, but the geography is far from being perfect. The banks of a river on the N. W. abound with native copper. The chief fish are sturgeon and trout; the latter being caught at all seasons, and said to weigh from twelve to fifty pounds.¹ This part of the sea of Canada opens into the lake Huron, by the straits of St. Mary, about 40 miles in length, and in some places only one or two miles in breadth; with a rapide towards the N. W. extremity, which may however be descended by canoes, and the prospects are here delightful. The storms on this large expanse of water are as dangerous as those on the ocean, the waves breaking more quick, and running nearly as high. The circumference of that part called Lake HURON is said to be about 1000 miles; and on the northern side are some islands called Manitulan, implying the place of spirits. Another short strait leads into the third lake called MICHIGAN, also navigable for ships of any burthen. When the population of North America shall have diffused itself towards the west, these lakes may become the seats of flourishing cities, and of arts and sciences now unknown in Europe. Their latitude corresponds with that of the Black Sea, and the gulf of Venice; nor are the rigours of the Baltic here to

¹ Morfe, 127.

LAKES. be apprehended. From the descriptions it does not appear that these lakes are ever impeded with ice.*

Winipic. The lake of Winnipeg or Winipic may also well aspire to the name of an inland sea:† but it yields considerably to the great Slave lake, or rather sea, a recent discovery, from which Mackenzie's river extends its course to the Arctic ocean. The Slave sea, according to Mr. Arrowsmith's maps, is about 200 miles in length, by 100 at its greatest breadth. The geography of this lake is rather imperfect; and it is not improbable that other large lakes may be found in the western regions of North America, which remain unexplored.

Slave sea. The smaller lakes shall be briefly described in the divisions of territory to which they belong. It may here suffice to observe that there are probably above two hundred lakes of considerable size in North America; a singularity which distinguishes it from any other portion of the globe. A theorist might perhaps consider this an additional argument for the novelty of this continent, as the waters still cover so much of its surface.

Rivers. In the ancient continent the rivers and mountains are usually confined within the limits of some great state, to which of course the description becomes appropriated. But in America these features are on so great a scale, that they pervade immense territories, divided among distinct nations, whence it would be difficult to assign a just arrangement. The river of Amazons, for example, pursues a long course in Spanish America, and an equal extent through the Portuguese territory, if the French do not now claim the northern shore. The river Mississippi,‡ or rather Missouri, belongs in part to the American States and in part to Spain.

* Mr. Morse, p. 136, says that these lakes never freeze, but the communications between them are frozen for a considerable time; and Hudson River is impeded with ice for three months in the year. The climate however gradually becomes warmer.

† According to Mr. Mackenzie, p. lxii. this lake discharges itself into Hudson's Bay, by the river Nelson, an elongation of the Saskatchewan. See Arrowsmith's map of N. America, edition 1802.

‡ Hennipin always spells the Mississippi *Mechassipi*; and says that the word in the language of the Illinois, or more properly Illinis, signifies the Great River. The same author informs us that the word *Illini* implies, in the tongue of that nation, a complete or brave man.

Amidst

Amidst this uncertainty, it seems preferable to describe the chief rivers and mountains under the general heads of North and South America.

Length of course seems universally and justly considered as the chief distinction of a river, which becomes noble as it were by the extent of its genealogy; while the great breadth and depth of a short stream issuing from a lake would deserve little attention. In this point of view the Mississippi is the most distinguished among the rivers of North America; its source having already been traced to three small lakes above lat. 47°, and it enters the sea in lat. 29°, after a comparative course of about 1400 B. miles. Nay of late the sources of the Missouri (the chief stream) have been detected about 600 B. miles more remote. The account of this noble river shall be transcribed from a recent system of American geography, as the author must have had several opportunities of being well informed.

“ The Mississippi receives the waters of the Ohio and Illinois, and their numerous branches from the east; and of the Missouri, and other rivers, from the west.* These mighty streams united are borne down with increasing majesty, through vast forests and meadows, and discharged into the gulf of Mexico. The great length and uncommon depth of this river, says Mr. Hutchins,† and the excessive muddiness and salubrious quality of its waters after its junction with the Missouri, are very singular. The direction of the channel is so crooked, that from New Orleans to the mouth of the Ohio, a distance which does not exceed 460 miles in a straight line, is about 856 by water. It may be shortened at least 250 miles, by cutting across eight or ten necks of land, some of which are not thirty yards wide. Charlevoix relates that in the year 1722, at Point Coupée, or Cut Point, the river made a great turn; and some Canadians, by deepening the channel of a small brook, diverted the waters of the river into it. The impetuosity of the stream was so violent, and the soil of so rich and loose a quality, that

* It is now known that the Missouri receives the Mississippi. The western shores of the Mississippi, from the mouth of the Ohio to its junction with the Missouri, are high and rocky. Some of the rocks present perpendicular walls of lime and free-stone to the height of three hundred feet. Account of Louisiana, Phil. 1804, 8vo.

† The calculations of this gentleman have since been found to exceed the reality by about one-seventh part.

RIVERS.

in a short time the point was entirely cut through, and travellers saved fourteen leagues of their voyage. The old bed has no water in it, the times of the periodical overflowings only excepted. The new channel has been since sounded with a line of thirty fathoms, without finding bottom. Several other points of great extent, have, in like manner, been since cut off, and the river diverted into new channels.

" In the spring floods the Mississippi is very high, and the current so strong, that it is with difficulty it can be ascended; but this disadvantage is remedied in some measure by eddies, or counter currents, which are generally found in the bends close to the banks of the river, and assist the ascending boats. The current at this season descends at the rate of about five miles an hour. In autumn, when the waters are low, it does not run faster than two miles: but it is rapid in such parts of the river as have clusters of islands, shoals, and sand banks. The circumference of many of these shoals being several miles, the voyage is longer, and in some parts more dangerous, than in the spring. The merchandize necessary for the commerce of the Upper Settlements, on or near the Mississippi, is conveyed in the spring and autumn in batteaux, rowed by eighteen or twenty men, and carrying about forty tons. From New Orleans to the Illinois the voyage is commonly performed in eight or ten weeks. A prodigious number of islands, some of which are of great extent, intersperse that mighty river. Its waters, after overflowing its banks below the river Ibberville on the east, and the river Rouge on the west, never return within them again, there being many outlets or streams by which they are conducted into the bay of Mexico, more especially on the west side of the Mississippi, dividing the country into numerous islands. These singularities distinguish it from every other known river in the world. Below the Ibberville the land begins to be very low on both sides of the river, across the country; and gradually declines as it approaches nearer to the sea. The island of New Orleans, and the lands opposite, are to all appearance of no long date, for in digging ever so little below the surface you find water, and great quantities of trees. The many beeches and breakers, as well as inlets, which have arisen out of the channel, within the last half century, at the several mouths of the river, are convincing proofs that this

peninsula was wholly formed in the same manner. And it is certain, Rivers. that when La Salle sailed down the Mississippi to the sea, the opening of that river was very different from what it is at present.

"The nearer you approach the sea this truth becomes more striking. The bars that cross most of these small channels, opened by the current, have been multiplied by means of the trees carried down with the streams; one of which, stopped by its roots or branches in a shallow part, is sufficient to obstruct the passage of thousands more, and to fix them at the same place. Astonishing collections of trees are daily seen in passing between the Balize and the Missouri. No human force is sufficient to remove them, and the mud carried down by the river serves to bind and cement them together. They are gradually covered, and every inundation not only extends their length and breadth, but adds another layer to their height. In less than ten years time, canes, shrubs, and aquatic timber, grow on them; and form points and islands which forcibly shift the bed of the river.

"Nothing can be asserted with certainty respecting the length of this river. Its source is not known, but supposed to be upwards of three thousand miles from the sea as the river runs. We only know that from St. Anthony's falls in lat. 45°, it glides with a pleasant clear current, and receives many large and very extensive tributary streams, before its junction with the Missouri, without greatly increasing the breadth of the Mississippi, though they do its depth and rapidity. The muddy waters of the Missouri discolour the lower part of the river, till it empties into the Bay of Mexico. The Missouri is a longer, broader, and deeper river than the Mississippi, and affords a more extensive navigation; it is, in fact, the principal river, contributing more to the common stream than does the Mississippi. It has been ascended by French traders about 12 or 1300 miles; and from the depth of the water and breadth of the river at that distance, it appeared to be navigable many miles further.

"From the Missouri river to nearly opposite the Ohio, the western bank of the Mississippi is, some few places excepted, higher than the eastern. From *Mine au Fer* to the Iberville the eastern bank is higher than the western, on which there is not a single discernible rising or

RIVERS.

eminence for the distance of 750 miles. From the Ibberville to the sea there are no eminences on either side, though the eastern bank appear rather the highest of the two, as far as the *English turn*. Thence the banks gradually diminish in height to the mouths of the river, where they are but a few feet higher than the common surface of the water.

"The slime which the annual floods of the river Mississippi leave on the surface of the adjacent shores, may be compared with that of the Nile, which deposits a similar manure, and for many centuries past has insured the fertility of Egypt. When its banks shall have been cultivated, as the excellency of its soil and temperature of the climate deserve, its population will equal that of any other part of the world. The trade, wealth, and power of America may at some future period depend, and perhaps center, upon the Mississippi. This also resembles the Nile in the number of its mouths, all issuing into a sea that may be compared to the Mediterranean, which is bounded on the north and south by the two continents of Europe and Africa, as the Mexican bay is by North and South America. The smaller mouths of this river might be easily stopped up by means of those floating trees, with which the river, during the floods, is always covered. The whole force of the channel being united, the only opening then left would probably grow deep, and the bar be removed.*

"Whoever for a moment will cast his eye over a map of the town of New Orleans, and the immense country around it, and view its advantageous situation, must be convinced that it, or some place near it, must in process of time become one of the greatest marts in the world.

"The falls of St. Anthony, in about lat. 45°, received their name from Father Lewis Hennepin, a French missionary, who travelled in these parts about the year 1680, and was the first European ever seen by the natives. The whole river, which is more than 250 yards wide, falls perpendicularly about thirty feet, and forms a most pleasing cataraet.

* Liancourt supposes that in the space of fourscore years the accumulations formed by the Mississippi have encroached about fifteen miles upon the sea. As far up as New Orleans the banks consist of trunks of trees agglutinated with black mud to a great depth, and which will probably in the course of ages become coal, for Mr. Hatchett's experiments seem to have demonstrated beyond all doubt, that this mineral originates from the vegetable kingdom.

The rapids below, in the space of 300 yards, render the descent considerably greater, so that when viewed at a distance they appear to be much higher than they really are. In the middle of the falls is a small island about forty feet broad, and somewhat longer, on which grow a few scragged hemlock and spruce trees; and about half way between this island and the eastern shore is a rock lying at the very edge of the fall in an oblique position, five or six feet broad, and thirty or forty long. These falls are peculiarly situated, as they are approachable without the least obstruction from any intervening hill or precipice, which cannot be said of any other considerable fall perhaps in the world. The country around is exceedingly beautiful. It is not an uninterrupted plain, where the eye finds no relief, but composed of many gentle ascents, which in the spring and summer are covered with verdure, and interspersed with little groves, that give a pleasing variety to the prospect.

"A little distance below the falls is a small island of about an acre and a half, on which grow a great number of oak trees, almost all the branches of which able to bear the weight are, in the proper season of the year, loaded with eagles' nests. Their instinctive wisdom has taught them to choose this place, as it is secure, on account of the rapids above, from the attacks of either man or beast.

"From the best accounts that can be obtained from the Indians, we learn that the four most capital rivers on the continent of North America, viz. the St. Lawrence, the Mississippi, the river Bourbon, and the Oregon, or the river of the West, have their sources in the same neighbourhood. The waters of the three former are said to be within thirty miles of each other; the latter is rather further west.

"This shews that these parts are the highest lands in North America; and it is an instance not to be paralleled in the three other quarters of the globe, that four rivers of such magnitude should take their rise together, and each, after running separate courses, discharge their waters into different oceans, at the distance of more than two thousand miles from their sources. For in their passage from this spot to the bay of St. Lawrence, east; to the bay of Mexico, south; to Hudson's bay, north; and to the bay at the straits of Annian, west, where the river

Oregon

The

RIVERS.

Oregon is supposed to empty, each of them traverses upwards of two thousand miles.*

Ohio.

"The Ohio is a most beautiful river. Its current gentle, waters clear, and bosom smooth and unbroken by rocks and rapids, a single instance only excepted. It is one quarter of a mile wide at Fort Pitt; 500 yards at the mouth of the Great Kanaway; 1200 yards at Louisville: and the rapids half a mile in some few places below Louisville: but its general breadth does not exceed 600 yards. In some places its width is not 400; and in one place particularly, far below the rapids, it is less than 300. Its breadth in no one place exceeds 1200 yards; and at its junction with the Mississippi neither river is more than 900 yards wide."†

Mr. Morfe proceeds to state the precise measurement of the length of the Ohio, with all its windings, from Fort Pitt to its junction with the Mississippi, amounting to 1188 miles. The inundations commonly begin with April, and subside in July. A vessel drawing twelve feet water might safely navigate from Pittsburg to the sea. Two great rivers unite to form the Ohio, namely the Monongahela, and the Allegany, both of them subservient to navigation.

From the preceding ample description, which the great importance of these rivers to the prosperity of North America authorizes, it appears that, setting aside the capricious distinctions of the savage tribes, the Missouri must be regarded as the chief river which constitutes what is called the Mississippi. Measured on the same merely comparative scale which has been adopted to give a general idea of the length of the rivers in Europe and Asia, the Missouri or Mississippi will be about 2000 miles in length. The great river of St. Lawrence is far inferior, being chiefly remarkable for its breadth. In South America the Marañon, or river of Amazons, measured on the same comparative scale, will be found to be about 2300, and the Rio de la Plata about 1900. In the same compa-

* These observations only shew the state of geographical knowledge in America at the time. The supposed sources, &c. of the rivers are wholly erroneous; and the Bourbon seems a non-existence, but as it was said to flow into Hudson's Bay may be the river Saskatchewan, of which the Nelson may be regarded as a continuation.

† Morfe's American Geography. Mr. Ellicott says, p. 23, that the river Allegany is called Ohio by the natives.

rative way, measured on the accurate planisphere of Mr. Arrowsmith, Rivers. the Kian Ku exceeds the Missouri and rivals the Marañon, which last is probably also rivalled by the Ob. Some deceptions have arisen on this curious subject, as the large rivers in America have been computed by actual navigation of the whole, or a part, in which every winding is taken into the account; while the length of those in Asia has been merely assumed from the general appearance in maps, without due attention to the innumerable deviations. A favourable climate, and other circumstances, render the American rivers more navigable; the Ob being impeded by ice, and the Kian Ku by the alpine rocks of Tibet.*

The noble river of St. Lawrence is universally regarded as the second St. Lawrence. in North America, being not less than 90 miles wide at its mouth, and navigable for ships of the line as far as Quebec, a distance of 400 miles from the sea. Near Quebec it is five miles in breadth; and at Montreal from two to four.' Though there be some rapids, yet this grand river may be considered as navigable to Kingston, and the lake Ontario, 743 miles from the sea. It is difficult to define the precise source of the St. Lawrence, though that name be generally confined to the river issuing from Lake Ontario; while the Niagara, which flows from the lake Erie,

* From Mr. Arrowsmith's last map of the American States, with corrections and additions to 1802, and his interesting map of North America of the same date, it appears that the *Mississippi* rises from the Turtle Lake, lat. 47° 40', not far to the south of the Red Lake. But from the last map, and the most authentic travellers, it is clear that the *Mississippi* should properly be termed the *Missouri*, the last being the most considerable river, and rising from sources in the western chain about 600 B. miles more remote than the furthest source of the *Mississippi*, so that the comparative course of the *Missouri* may be about 2000 B. miles. The *Missouri*, like the St. Lawrence and river of Amazons, is a white muddy stream, while the *Mississippi* is clear like the Black River, which falls into that of Amazons. Charlevoix, ii. 218, has described the confluence as the grandest in the world. Each river is about half a league in breadth; but the *Missouri* is the broadest and the most rapid. Le Page du Pratz, in his history of Louisiana, (i. 202. of the English abridgement) says that the French word *Mississippi* is a contraction of the savage term *Mescha-chipi*, which literally denotes the ancient Father of Rivers. Mr. Hutchins observes (Imlay, 389) that the natives still call it Meschapi; and the same author adds, p. 405, that the *Missouri* "affords a more extensive navigation, and is a longer, broader, and deeper river than the *Mississippi*." The journey of a great savage traveller to the sources of the *Missouri* and to the noted western river, Du Pratz, ii. 125, seems to correspond with recent discoveries, and the Otter nation probably still exists. The free navigation of the *Mississippi* was secured to the American States by the treaty with Spain 1795. The inundations begin in March and subside in July. It appears from Mr. Mackenzie's *Voyages* 1802, 4to. p. xxxvii. that some rivers of N. America have sunk more than ten feet beneath their ancient level. ? Weld, ii. 56. 8vo.

RIVERS.

is regarded as a distinct stream. As in Asiatic geography the Angara is traced from the sea of Baikal, without assuming the Selinga, as a further source, so by analogy the St. Lawrence cannot be traced beyond the lake Ontario, nor can geographical usage permit it to be traced to the lake Superior; and far less, with Mr. Weld, to the lake Winipic, which, according to the best maps, has no communication whatever with what has been above called the sea of Canada, consisting of the joint lakes Superior, Michigan, and Huron. The length of the St. Lawrence may therefore be about 700 B. miles, the breadth being the grand characteristic.

The other chief rivers in North America are the Saskashawin, the Athabasca, the Unjiga or Mackenzie's river,* the Rio Bravo, which flows into the gulf of Mexico; that of Albany, which joins Hudson's Bay: Nelson river and Churchill river are also considerable streams which flow into that sea; but their geography is far from being perfect. The same observation must be extended to the Oregon, or great river of the west, which, confined by a chain of mountains, runs S., till by a western bend it join the Pacific. But the discovery of the western regions of America may disclose some considerable streams in that quarter.

Mountains.

The mountains of North America are far from rivalling the Andes in the south. Some irregular ranges pervade the Isthmus, but it seems mere theory to consider them as connected with the Andes, as they have neither the same character nor direction. In the isthmus there are also several volcanoes; but the natural history of Spanish America is extremely imperfect.

The centre of North America seems to present a vast fertile plain, watered by the Missouri and its auxiliary streams. On the west, so far as discovered, a range of mountains proceeds from New Mexico in a northern direction, and joins the ridge called the Stoney Mountains, which extend to the vicinity of the Arctic ocean. This ridiculous appellation might well be exchanged for that of Mountains of Colon. In general, from the accounts of navigators who have visited this coast, it seems to resemble that of Norway,

* See the article Native Tribes for further details.

being

being a wide alpine country of great extent; while the shore, like that of Norway, presents innumerable creeks and islands. This alpine tract, from the Stoney Mountains and Mackenzie's river westwards to the source of the Oregon and Beering's strait, may perhaps contain the highest mountains in North America, when completely explored by the eye of science. On the north east, Greenland, Labrador,* and the countries around Hudson Sea, present irregular masses covered with eternal snow, with black naked peaks, resembling in form the spires of the alps, but of far inferior elevation, mountains generally decreasing in height towards the pole.

The most celebrated mountains in North America are those called the Apalachian, passing through the territory of the United States from the S. W. to the N. E. According to the best maps they commence on the north of Georgia, where they give source to many rivers running south to the gulf of Mexico; and to the Tenassee and others running north. There are several collateral ridges, as the Iron, or Bald Mountains, the White Oak Mountains, and others; the exterior skirt on the N. W. being the Cumberland Mountains. The Apalachian chain thence extends through the western territory of Virginia, accompanied with its collateral ridges, the breadth of the whole being often seventy miles, and proceeds through Pennsylvania, then passes Hudson river; and afterwards rises to more elevation, but seems to expire in the country of New Brunswick.†

Apalachian
Mountains.

The

* A high ridge passes S. W. from the coast of Labrador to the source of the Utawas, dividing the rivers that fall into St. Lawrence and Hudson's Bay. The Stoney mountains run parallel with the Pacific from Cook's entry to the river Columbia, where they are more distant from the coast and less elevated. The rocks west of Winnipeg are soft limestone, on the E. a dark grey granite: and all the great lakes are between the limestone and granite ranges. Mackenzie, 400, 401. 403.

† The chief summits appear to be in the province of New Hampshire; where the White Mountains are by some reported to be 9000 feet above the sea. For a particular account of these mountains, see Morse's American Geography, p. 292. But the Duke de Rochefoucault says that no mountains in North America exceed the Vosges, or Wasgau. Kalm, ii. 352, observes that the snow, even on the highest mountains, always melts during the summer. It may well be affirmed that the White Mountains cannot much exceed 6000 feet: and the glaciers of the Pyrenees at 9000 feet shew the futility of the calculation. It is probable that the highest mountains of North America are towards the western shores along the Pacific. According to Volney the Apalachian

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chain

MOUNTAINS The Apalachian chain may thus extend about 900 g. miles, a length unrivalled by any European mountains, except the Norwegian alps. In no chain perhaps are the collateral ridges more distinct; and a naturalist would at once pronounce that the central, or highest, must be granitic, the next schistose, and the exterior belts calcareous. The granite seems commonly to consist of white felspar, bluish or rather pellucid quartz, and black mica. The schistose band, generally metalliferous in other regions, here presents copper ore; and in Canada lead and silver are said to have been discovered. The lime stone contains, as usual, many petrifications, particularly the cornu ammonis, a small scallop shell, and several sorts of corals.* The height of the chief summits does not appear to be precisely ascertained, but probably does not exceed 3000 feet above the sea; and they are often clothed with forests. Mr. Weld conjectures that the peaks of Otter, the highest of what are called the Blue Mountains, are little more than 2000 feet in height; and at any rate much inferior to that of Snowdon.

The late travels of the duke de Rochefoucault in North America, present some valuable information concerning the orology.* The primitive calcareous rock is mingled, in veins or banks with the granitic, and is evidently contemporary. Near Philadelphia large pieces of talc appear, instead of mica. There are also veins of hornblende, quartz, and marble, in the position of metallic veins. It is a remarkable feature in the mineralogy that the granitic mountains approach nearest to the sea, while at a greater distance the rocks are calcareous; and the red primitive limestone is sometimes covered with breccia; and argillaceous schistus. The lakes of Upper Canada are surrounded with calcareous rocks; while in Lower Canada, from Montreal to the sea, the

chain in Virginia does not exceed the height of 2,700 feet. That of the highest peak of Kattskill mountains is found to be 3,549 feet above the level of Hudson's river. *New York Transactions*, part 2, p. 128. Killington peak in Vermont is 3,454: *Williams's Vermont*, p. 23. The same author infers the utmost height of the White Mountains in New Hampshire, which are visible thirty leagues at sea, to be 7,800 feet.

* Pennant, A. Z. ccxxix.

• See also the *Journal des Mines*, No. 54, Ventose, an. 7. This valuable journal has been recently resumed, after an interval of two years; No. 55 being Germinal, an. 9.

granite predominates.* At the isle of St. Helen this substance is ap- MOUNTAINS
 parent, and at the mountain of Beloeil displays much black schorl.
 The black slate of our traveller is the black schistose limestone of Kalm.
 The rock of Quebec is said to consist of grey granite, mingled with
 schorls; and was called the rock of diamonds, because quartz crystals
 were found. In the vicinity blocks of granite are mingled with lime-
 stone, and the bank of Newfoundland is supposed to be a mass of gra-
 nite, covered with sand. Towards New York and Boston the rocks are
 of a soft granite interspersed with limestone and schistus; but towards
 Carolina and Florida the granitic mountains are at a considerable distance
 from the sea, which seems gradually to have retired. This observing
 traveller is of opinion that the highest mountains in North America do
 not exceed the elevation of the Vosges in France, that is perhaps 4 or
 5000 feet.

But from the travels of Kalm, a far more skilful naturalist, it would
 appear that the rocks of North America often consist of a substance un-
 known to modern systems of mineralogy, and which may be termed
calcareous granite, the absence of the felspar being supplied by primitive
 limestone. The Swedish traveller minutely describes this substance, as
 consisting of grey limestone, purple, or garnet coloured quartz, and black
 mica.⁹ The limestone effervesces strongly with aqua-fortis; and there
 are some particles of felspar. Another mountain, near the river St.
 Lawrence, is composed of red felspar, black mica, white limestone, with
 grains of the purple or red quartz. Sometimes this calcareous granite is
 schistose, or assumes the form of gneiss. Part of the hills near the isle
 of Orleans is composed of grey quartz, reddish and grey limestone,
 and grains of sand. Near Fort St. Frederic, or Crown Point, Kalm
 observed fragments of granite mixed with schorl, without any calca-
 reous addition; and he found ammonites about two feet in diameter.
 Towards the lake Champlain he observed quantities of red sand, which
 seemed to be decomposed or pounded garnets.¹⁰ The Apalachian moun-
 tains he does not appear to have examined: but he mentions the cal-

* The cataract of Niagara falls over a fine white calcareous freestone, hardened by the sand of
 quartz; and which our traveller strangely supposes to be gypsum.

⁹ ii. 346. 349. 357.

¹⁰ Ib. 196. 199.

MOUNTAINS careous granite as frequent in Pennsylvania, and often used in building at Philadelphia. He describes the lapis ollaris of New England, as sometimes spotted with starry asbestos; while green soap rock and amianthus are common in Pennsylvania. The hatchets of the savages were frequently of fine basalt; their knives of quartz and petrosilex; their kettles of lapis ollaris, grey or green; and their tobacco pipes of the same substance; but those of the chiefs, of beautiful red serpentine, from the west of the Mississippi.*

A late traveller † divides the territory of the United States into five regions: 1st, The granitic. 2d, Sandstone. 3d, The calcareous. 4th, The sea sand. 5th, The river alluvions.

The first, or that of granite, proceeds from the mouth of the river St. Lawrence down to the Long Island. In New Hampshire and Main it is mixed with some sandstone and limestone, but the White Mountains in New Hampshire are granitic. The bed of the river Mohawk seems to divide the granite from the sandstone, yet there is some granite on the river Suskanna or Susquehannah, and many blocks at the foot of the south-west chain in Virginia.

The Catskill mountains are of the same sandstone as the Blue Ridge, and according to our author the whole Apalachian mountains consist of sandstone.‡ Towards the north-west the sandstone terminates in slate and marl.

The calcareous region extends from the west of the Apalachian mountains to the river Mississippi, and probably as far as the mountains of Colon, or what are called the Stoney Mountains, forming a horizontal bed, at a greater or less depth, according to the depositions of soil.

* Of the same description were the celebrated *Calumets*, or pipes of peace, so called by the French settlers in Canada, from the Norman word *chalumeau*, the native term being *paogan*, and in the Iroquois *ganondeo*. Lahontan, i. 270. He means the head of the calumet, eight inches long; while the mouth projected about three inches; the pipe or stem, being about four or five feet in length, was of cane, and adorned with feathers. Ib. 47.

† Volney on the climate and soil of America, Paris, 1803, 2 vols. 8vo. a work to be read with some caution, the author having left America in disgust, because his particular dogmata did not meet with more attention.—He is however ingenious and intelligent when he does not enter the region of antiquities, where, as he has very little learning, he attempts to supply the defect by idle speculation.

‡ When the Patomak bursts through the chain, it is of grey quartz, according to Volney.

The fourth region, or that of sea sand, comprises all the shore from Long Island as far as Florida. Its inland boundary is a seam of granite, full of large mica, or rather talc, which runs constantly in the direction of the coast extending from the west bank of the Hudson river, as far as the river Roanok, in North Carolina, a space of five hundred miles, the breadth being from two to six miles. It generally occasions falls in the rivers, and marks the extreme limits of the tide. The land between it and the sea, varying in breadth from thirty to one hundred miles, is evidently sand brought by the ocean, originally bounded by this granitic ridge. The sand seems to rest on granite, as the projecting rocks on the coast are of this substance.

The region of the river alluvions spreads from the granitic ridge to the feet of the mountains of sandstone.

From this description it would seem that the granitic ridge of the Apalachian chain is not only narrow, as in the Pyrenees, but, as in the latter, it is far lower than the limestone, so in the Apalachian it yields greatly in height to the sandstone.

In singular opposition to geographic theories, the Apalachian chain, instead of giving source to rivers, generally crosses their current.

The mountains in the Isthmus, as well as those in the western part of North America, are certainly of far superior elevation: and in most maritime divisions of the old and new continents the highest mountains are towards the west, as their most precipitous sides uniformly front the west and south. But of the Isthmus, the kingdom of Mexico, and California, the natural history and geography are far from being clearly illustrated. In the province of Darien the Andes, according to the best maps, seem to expire in the ridge called Sierra Tagargona, which may be said to be lost in the sea on the west of the gulf of Darien. This ridge, with the peak of Panama, belong to South America: but the inspection of any good map of this part will sufficiently shew that the ridges in the province of Panama have not the smallest connection with the Andes, but are scattered in every direction. On the west of that province, as already stated, a considerable chain passes north and south, which may be regarded as a natural division between the two great portions of America. This chain is called the Sierra de Canatagua. The ridges in Veragua

MOUNTAINS Veragua also run N. and S. and on the west of that province is the volcano of Varu. Of the nature and height of the mountains in Mexico there is no particular account. Not far from Vera Cruz, Chappe D'Auteroche ascended a mountain of great height, which seems to have been volcanic;" and he adds that the mountain of Orisava is said to be the highest in that region, the snowy summit being visible from Mexico at the distance of twenty leagues.

On the western side of North America volcanoes have been observed by navigators; and one is said to exist in the province of New Hampshire."

According to the usual arrangement of this work, the description of the new continent begins with North America, because that division contains the most important power, that of the United States. The account of their territory shall be followed by that of the Spanish and British possessions in North America. Another division shall be reserved for the Native Tribes, and Unconquered Countries; and this part shall close with a description of those North American islands commonly called the West Indies.

" Voyage to California, p. 33.

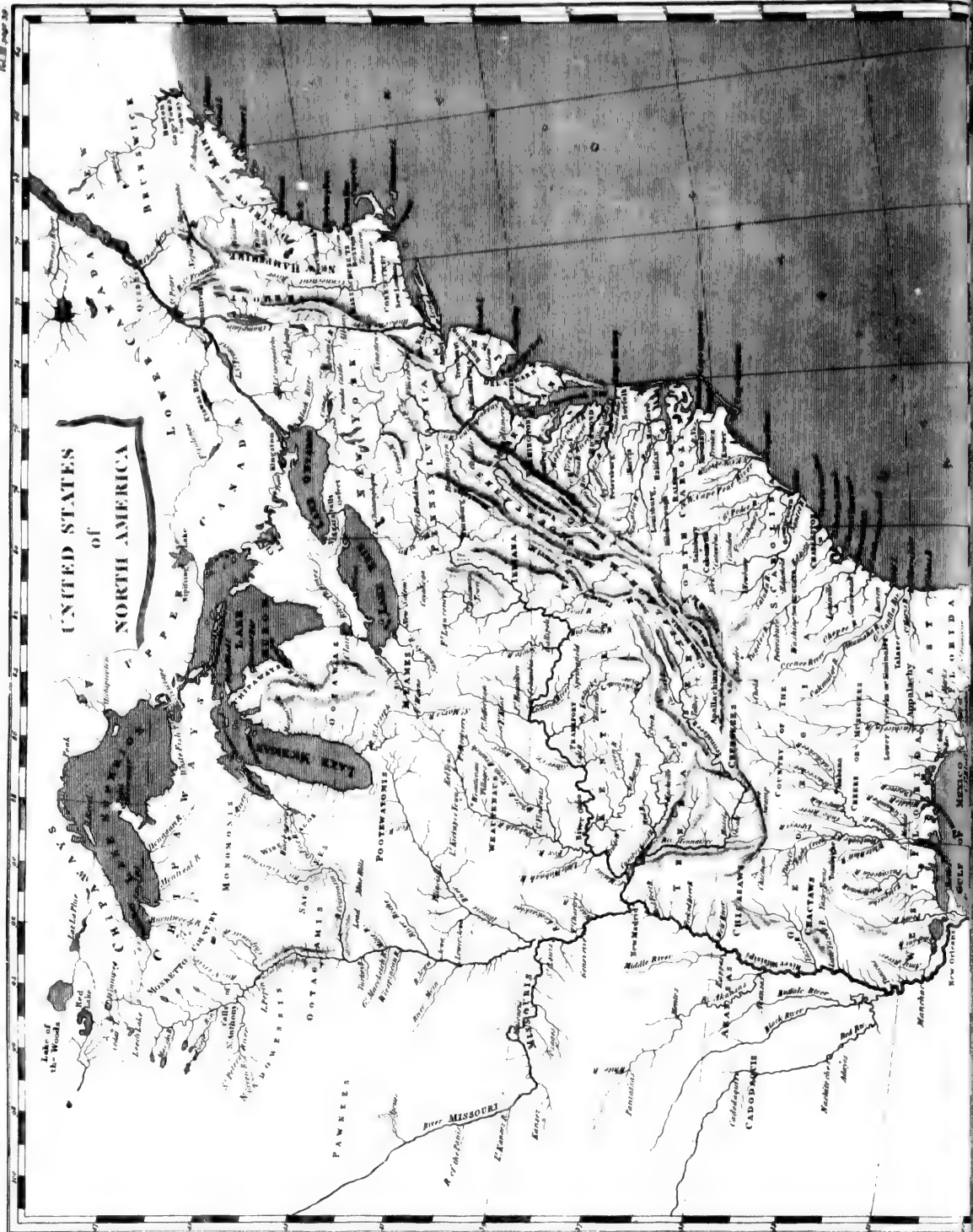
" Pennant, A. Z. ccxxx. Morfe, p. 291, mentions another mountain in the same province of volcanic appearance, and 3254 feet high, if the measurement be exact,

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THE UNITED STATES OF AMERICA.

CHAPTER I.

HISTORICAL GEOGRAPHY.

Boundaries.—Divisions.—Progressive Geography.—Historical Epochs.

THE United States of America are so denominated from the happy ^{NAMES} union which binds the several states in one bond of concord, and which it is to be hoped, for the common interest of humanity, that neither the violence of enemies nor the rage of party will ever be able to interrupt.

The eastern boundary is the Atlantic ocean, and the western in part ^{Boundaries.} the great river Mississippi, which has been considered as a limit of Spanish America, but the recent acquisition of Louisiana seems to extend this boundary in the southern part to the mountains of Natchez and the Rio Bravo; for the ancient limits of Louisiana must be regarded in preference to the encroachments which the Spaniards have made upon the original French territory, these settlements having been formed by the permission of the French, in consequence of the family compact; a consideration which cannot be admitted in different circumstances. Even towards the north the western limit may be regarded as arbitrary, and may be extended by actual possession as far as the Pacific ocean. Perhaps the time is not far distant when roads and canals may be extended to the western shores, and an immediate trade opened with China and the Spice Islands.

On

BOUNDARIES On the north an ideal line, pervading the great lakes of Canada, is continued along the river St. Lawrence to latitude forty-five degrees, not far to the south of Montreal, when it passes due east, and follows a chain of mountains north-east, and afterwards diverges south-east to the river St. Croix, which falls into the bay of Fundi. On the south a line, merely arbitrary, about latitude thirty-one degrees, divides the United States from the Spanish dominions of west and east Florida. This line has been accurately traced in the maps which accompany Mr. Ellicot's journal of his operations for determining this frontier. The southern boundary of Louisiana is the gulf of Mexico.

Extent. The greatest extent of the United territory, as commonly computed, is from east to west in the northern part, where it exceeds thirteen hundred British miles, and the line along the shores with the Atlantic nearly corresponds; but the breadth from the Canadian lakes to the southern frontiers of Florida is about one thousand British miles. The square acres, exclusive of Louisiana, have been computed at six hundred and forty millions, and those covered with water being supposed fifty-one millions, there will remain five hundred and eighty-nine millions of acres.

Divisions. These fertile and flourishing states have by some writers been regarded under two divisions, the northern and the southern, but this classification is reprobated by patriotic Americans as containing the seeds of political division. Others have divided them into northern, middle, and southern: while others denominate all those that border on the ocean Atlantic states, and the others inland states. But a general table can alone be liable to no objections.

District of Maine	-	-	-	-	151,719*
Vermont	-	-	-	-	154,465
New Hampshire	-	-	-	-	183,858
Massachusetts	-	-	-	-	422,845
Rhode Island	-	-	-	-	69,122
Connecticut	-	-	-	-	251,002

* The numbers are from the Census 1801, including the slaves, being the last enumeration which has been made.

New

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41

New York	-	-	-	-	-	586,203
New Jersey	-	-	-	-	-	211,149
Pennsylvania	-	-	-	-	-	602,365
Delaware	-	-	-	-	-	64,273
Maryland	-	-	-	-	-	349,692
Virginia	-	-	-	-	-	886,149
Kentucky	-	-	-	-	-	220,960
North Carolina	-	-	-	-	-	478,103
South Carolina	-	-	-	-	-	345,491
Georgia	-	-	-	-	-	162,684
Tennessee	-	-	-	-	-	105,602
Ohio	-	-	-	-	-	45,365
Louisiana *	-	-	-	-	-	

POPULATION.

5,291,147

The population was also thus estimated, under another form, in 1801, and must have considerably increased since that period.

		Free White Males.	Free White Females.	Total.
Under 10 years of age	- - -	713,825	725,768	1,439,593
10 and under 16	- - -	343,205	323,465	666,670
16 and under 26, including heads of families		393,074	401,811	794,885
26 and under 45, ditto		432,531	405,485	838,016
45 and upwards ditto		262,785	354,727	517,512
		2,145,420	2,111,256	4,256,676
All other free persons, except Indians, not taxed				109,335
		Total Whites		4,366,011
		Slaves		894,452
				5,260,463

* The inhabitants of Louisiana are 42,375, including 12,920 slaves. Account of Louisiana, 1804. The district of Columbia, and the Mississippi and Indiana territories, are not included. The population of Upper Louisiana is only estimated by Volney at about 2,500 persons. The banks of the Missouri are already colonized to the distance of about forty miles above its junction with the Mississippi by more than 3000 inhabitants, and the number is continually increasing. Mich. 119.

VOL. III.

G

This

New

UNITED STATES.

This statement may be compared with the population of 1791.

SCHEDULE

Of the whole Number of Persons within the several Districts of the UNITED STATES, according to an Act "Providing for the Enumeration of the Inhabitants of the United States," passed March 1, 1791.

DISTRICTS.	Free White Males of sixteen Years & upwards, including Heads of Families.	Free White Males under sixteen Years.	Free White Females, including Heads of Families.	All other Persons.	Slaves.	Total.
Vermont	22,435	22,328	40,505	252	16	85,536
New Hampshire	36,086	34,851	70,160	630	158	141,885
Maine	24,384	24,748	46,870	538	none	96,540
Maffachusetts	95,453	87,289	190,582	5,463	none	378,787
Rhode Island	16,019	15,799	32,652	3,407	948	68,825
Connecticut	60,523	54,403	117,448	2,808	2,764	237,946
New York	83,700	78,122	152,320	4,654	21,324	340,120
New Jersey	45,251	41,416	83,287	2,762	11,453	184,139
Pennsylvania	110,788	106,948	206,363	6,537	3,757	434,373
Delaware	11,783	12,143	22,381	3,899	8,887	59,004
Maryland	55,915	51,339	101,395	8,041	103,036	319,788
Virginia	110,936	116,135	215,046	12,866	292,627	747,610
Kentucky	15,154	17,057	28,922	114	12,430	73,677
North Carolina	69,988	77,506	140,710	4,975	100,572	393,751
South Carolina						240,000
Georgia	13,103	14,044	25,739	398	29,264	82,548
	Free White Males of twenty-one Years of Age & upwards, including Heads of Families.	Free Males under twenty-one Yrs. of Age.	Free White Females, including Heads of Families.	All other Persons.	Slaves.	Total.
South-western Territory	6,271	10,277	15,365	361	3,417	35,691
North-western Territory						5000
						3,925,253

Truly stated from the original Returns deposited in the office of the Secretary of State.*

October 24, 1791.

THOMAS JEFFERSON.

* Morie's American Geography, Londqn, 1792. 8vo. p. 536.

The original population of this extensive and flourishing country consisted of numerous wild and rude tribes, whose denominations and memory have in many instances almost perished, but some idea of their manners shall be given in describing the native nations. The progress of the English colonies has been already detailed in the general description of America, and there are numerous descendants of the Germans, Dutch, and Swedes, who have formed considerable settlements in this region.

ORIGINAL
POPULA-
TION.

The following account of the savage nations who possessed the territory of the United States, is extracted from a recent American publication: *

" Beginning in the north-east, we first meet with the name of the Tarrenteens, who resided on the river Kennebec, and other rivers in the district of Maine, and the country east of it. These were called by the French Abenakies, and were always hostile to the English, having French missionaries early settled among them.

" The Aberginians, who resided round Massachusetts Bay. These were often attacked by the neighbouring Tarrenteens, and as often fled to the English for protection. The Mohegins, living between the Thames and Connecticut rivers, and the higher branches of the former, who were generally friendly to the first settlers.

" The Pequods, settled on the sound between New London and Stonington, who were nearly exterminated in the war of 1637, four or five hundred being destroyed in one campaign. The Narragansets, who dwelt principally round the bay of the same name. This was a numerous tribe, and could furnish 2,000 fighting men in 1675. They were the most ingenious savages in the eastern country; they made the neatest wampum, pendants, and bracelets, stone pipes, and earthen ware, which they disposed of to other Indians for furs and peltry; bartering the latter to the white inhabitants for shrouds, paints, rum, and baubles.

" The next to the Narragansets were the Womponoags, whose sachem was Massasoiet, that gave his name to Massachusetts Bay, and had his principal seats at the towns now called Bristol and Middle-

* Sketch of the Geography of the United States, Philadelphia, 1805.

791.

rics of the
the Enume-
ch 1, 1791.

	Total.
16	85,519
58	141,885
	96,540
	377,787
18	68,825
4	237,946
4	340,120
3	184,139
7	434,373
	59,004
6	319,728
7	747,610
	73,677
2	393,751
4	240,000
	82,548
	Total.
	35,691
	5000
	3,925,253

erson.

The

ORIGINAL
POPULA-
TION.

borough. It was Philip, the son of this chieftain, who waged a destructive and obstinate war against the English in 1675, and at last fell in the contest.

" Besides these, there were many clans of less notoriety in what is now called the New England States, all of whom are nearly extinct.

" To the southward of the Pequods there was another powerful nation, who were sovereigns of an extensive region, reaching from the Connecticut river to Chesapeake bay, and as far westward as the Kittatany mountains, comprehending all that part of New York that lies between the highlands and the ocean, New Jersey, Pennsylvania, and Delaware states. They called themselves Linnellinopes; by the French they were termed Les Loups, and by the English, Delawares. This confederacy comprised numerous subordinate clans, the principal of which were the Chihocki, who dwelt on the west side of the river Delaware; the Wanami, who ranged from the Raritan, in New Jersey, to the sea coast; the Munseys, on the upper streams of the Delaware, down to the Lehigh; the Wabingas, or river Indians, who resided between the Delaware and Hudson, and from the Kittatany to the Raritan; and the Mohickons or Mannhattans, who occupied Staten Island, York Island, and part of Long Island, from the highlands to the ocean. These confederate tribes waged war for the greatest part of a century with the Iroquois, or five nations, but were at last subdued, and reduced to the most humiliating terms, about the year 1682, the time when William Penn landed in Pennsylvania.

" The territory of Maryland was inhabited by the Susquehannocs, who were completely destroyed by the five nations; by the Nanticocks, Conoys, Tuteloes, and Monakans, most of whom united with the Iroquois, or five nations, in the subjugation of the Delawares.

" When the English made their first settlement in Virginia in the year 1607, this country, from the sea coast to the mountains, and from Potowmac to the southern waters of James river, was occupied by forty different tribes of Indians. Of these the Powhatans, the Mannohoes, and the Monacans were the most potent. The Powhatan confederacy claimed an extent of 8,000 square miles, and contained a population of 8,000 souls. These numerous tribes are nearly lost: of forty nations
and

and upwards, there are hardly forty persons left to witness the effects of European civilization.

ORIGINAL
POPULA-
TION.

"To the south of James river in Virginia, and in North Carolina, the most noted Indian tribes were the Chowannoos, with their allies, the Nottaways and Meherrins on the east, and the Corees, Tuscaroras, and Cherokees on the west. The Tuscaroras were a numerous and powerful nation, but having engaged in a war with the white inhabitants about the year 1712, were almost exterminated, a remnant of the tribe being obliged to move to the Ohio, where they afterwards united with the Iroquois, and became the sixth confederate nation.

"The most noted nations among the aborigines of South Carolina were the Stonoes and Westoes, the Sarannees, Apalaches, Congaroes, Elaws, and Yamassees on the east and in the centre, who are now either extinct or mingled with other tribes; and the Catawbias, Creeks, and Cherokees on the west, who still retain their names and a portion of their ancient territories on the frontier of the state."

The progressive geography of this ample territory is not undeserving of particular attention. It has already been observed, that when Raleigh sent a small colony in 1585, they unfortunately landed in North Carolina, where the shores were little auspicious to a settlement. This colony accordingly returned the following year, and no further attempt was made until the commencement of the reign of James I.

Progressive
Geography.

In 1606 Mr. Percy, brother of the earl of Northumberland, proceeded with a small colony, and discovered the Powhatan or James River. On the 26th of April 1607, Capt. Christopher Newport discovered the noble bay called Chesapeake, and bestowed the name of Cape Henry, probably in honour of Henry Prince of Wales, upon the southern promontory.* Next year a small colony landed, and having chosen Wingfield as president, they commenced a settlement on James River, at the place now called James Town, the first lasting establishment of the English in this quarter of the world. This settlement only consisted of one hundred and four persons. In the same year a small colony was fixed about nine or ten leagues to the southward of the mouth of Sagadahok river. It is a remarkable coincidence, that in the same year Quebec was founded by the French.

* Morfe, London, 1794, 4to. p. 90.

PROGRES-
SIVE GEO-
GRAPHY.

In 1609 the celebrated Capt. Smith, by sailing up several of the rivers, explored some part of the interior country. Lord Delawar was in the following year appointed Governor of the British settlements, and his name was imparted to another grand, and since commercial bay.

Little further was done to explore the country until 1614, when Capt. Smith, in a small boat, coasted from Pennopscot to Cape Code. In the same year he drew a map of the country under the denomination of New England.

In 1620 the first town in this division was founded, and called Plymouth, and in the following year Massasoit, one of the most powerful Sagamors, or chiefs of the neighbouring savages, came with sixty attendants to visit the new settlement, and entered into an amicable treaty to avoid injuries, to punish offenders, and to restore stolen goods, with promises of mutual assistance in case of war. This treaty was faithfully observed for half a century, and the memory of Massasoit is still held in traditional veneration. In a war with a neighbouring tribe called Narragansets, who gave their name to an adjacent bay, the English settlers successfully defended their new ally, and nine Sachems declared their attachment to England. In 1624 a bull and three heifers arrived from England, being the first cattle seen in this part of the world.

In 1627 a colony of Swedes and Finlanders arrived at Cape Henlopen, and having purchased from the savages the land extending from that promontory to the falls of the Delawar, on both sides of the river, they constructed several forts.

In the spring of 1630 a grand confederacy was entered into by the savage tribes, particularly the Narragansets, to extirpate the English colony at Plymouth, but the plot was disclosed by a savage, and the English preparations effectually stifled this design. In 1643 the four colonies of Plymouth, Massachusetts, Connecticut, and New England, entered into a strict alliance, a congress being instituted, consisting of two commissioners from each colony, to be annually chosen, and considered as the representatives of the United Colonies of New England. The powers delegated to the commissioners, according to Dr. Morse, were nearly the same as those vested in congress by the articles of confederation agreed upon by the United States 1678; and this union subsisted,

with some few alterations, until the year 1686, when all the charters, except that of Connecticut, were in effect annulled by a commission from the weak and despotic James II. PROGRESSIVE GEOGRAPHY.

By the consultation of the ancient maps the reader will observe, that the inland discoveries were far from being extensive. But while the English were engaged in the solid pursuits of commerce and agriculture, the French colonists at Quebec were, with their usual spirit of adventure, gradually advancing in the knowledge of the interior. The national character of an unbounded fondness for the sex, also led the French to form a most intimate connection with the savage females, while the gravity and honest pride of the English, not to speak of the severe puritanical maxims then prevalent among them, preserved their race pure and unmixed.

During the civil wars and commonwealth of England the emigrations appear to have been few, and no new colonies were founded. Religious liberty, the grand object of the emigrants, began to be enjoyed at home, and the royalists were contented with nourishing their hopes on the continent of Europe.

After an interval of thirty years, Charles II. granted New Jersey to his brother the Duke of York. It has already been mentioned that the Dutch had settled, at an early period, in the country since called New York and New Jersey. But the importance of New York in particular will warrant further details. The celebrated Hudson, who discovered the bay or sea which bears his name, had, in a preceding voyage, 1609, discovered the noble river also consecrated to his memory. He had at this time passed into the Dutch service, which he again left in 1610, having, in honour of his former masters, given the name of New Holland to the country adjacent to Hudson River, and the Dutch took formal possession in 1615.* Their little town of New Amsterdam was situated in an isle called Monahattan, at the mouth of the river to which Hudson had given his name. Fort Orange stood one hundred and fifty miles above the mouth of the river, and a considerable trade was there carried on with the savages, who brought furs from a considerable distance. These Dutch possessions had always been beheld with a jealous

* Hist. Gen. des Voyages, xxi, p. 282. edit. Hol.

eye by the English colonists, and when the disputes arose with Holland, Charles II. embraced the opportunity of transferring the territory to his brother the Duke of York. In 1664 Carr was sent with three thousand men to take possession, which was easily accomplished, most of the inhabitants accepting the proffered oath of allegiance. New Amsterdam was found to be neatly built, the houses being of stone and brick, and covered, in the Dutch taste, with a mixture of red and black tiles. The name of New York was given to the town, and afterwards extended over the country, while Fort Orange received the new appellation of Albany. The boundaries of this region in the Dutch charter were Maryland on the south, lands belonging to the savages on the west, the French colonies on the north, and New England on the east. A part of it was ceded by the Duke of York to subaltern proprietors, who called it New Jersey, probably in honour of one of their colleagues, Sir George Carteret, a native of the isle of Jersey. The subsequent settlements of Pennsylvania and South Carolina still further enlarged the bounds of precise knowledge. Those of North Carolina and Georgia are comparatively modern. Yet the progressive geography and natural history continued long after to make so slow progress, that Kalm, who travelled about 1745, complains much of the neglect of the sciences in the English colonies, while he applauds the French at Quebec for their exertions in this department. Even in England the people were contented with translations of the French attempts to explore the interior, without being excited to emulate the example.

With the epochs of discovery of the great rivers and harbours, the progressive geography of the United States might detail those of the chains of mountains, chief rivers and lakes, in the interior. But to give due exactness to such a discussion would require the labour and detail of a special dissertation; suffice it to observe, that in the time of Lahontan the great lakes, or rather inland seas of Canada, had been explored with considerable exactness, and report had mentioned that four great rivers running to the east, west, north, and south, arose not far from each other. Since greater certainty has arisen, we know that the river running towards the south is the Missouri, which afterwards receives a smaller stream called the Mississippi. That passing towards the north is the Unjiga, also called

M'Kenzie's river. The grand stream devolving towards the east, and called by the French the river of Bourbon, is the Saskashawin, or Nelson river, while that which seeks the west is the Columbia or Oregon, but which in fact only tends westwardly after a long course to the southward. The sources of the northern and western river are very near, as well as those of the southern and eastern, but the latter are at least six degrees, or three hundred and sixty-three g. miles distant from the former. They however rise in the same chain, absurdly called the Stoney Mountains, but which, in order to carry the fame of the great discoverer to the remotest parts of this continent, I would propose to call the mountains of Colon.

PROGRESSIVE GEOGRAPHY.

Among the chief historical epochs of the United States must first be classed their respective origins, as above explained. The introduction of tobacco in Virginia, 1616: the intended massacre of the English by a native Wirowanee or chief 1618, and the subsequent war: the abolition of the first charter, 1624: the struggles against the arbitrary disposition of Charles I.: the privileges granted by that monarch, and the loyalty of the Virginians, who did not acknowledge the commonwealth till 1651: the insurrection of Bacon against the authority of Charles II.; are epochs of Virginian story. The colony in the northern provinces called New England was chiefly founded by the puritans, and was strengthened by the intolerant spirit of archbishop Laud. Sectarian subdivisions occasioned new colonies; and the Pequods, a native tribe, were extirpated. The colonies in the south are of more recent foundation, and present still fewer materials for history.

HISTORICAL Epochs.

In several systems of geography the original charters and minute events of each state are detailed apart, a plan more reconcileable with topography. The several streams which constitute a large river cannot be delineated in general geography; and far less those provincial epochs which rather belong to a prolix history. It will therefore be sufficient for the present design to commemorate the chief epochs of that contest which terminated in the independence of the United States. The northern colonies of New England had shewn repeated symptoms of their original spirit of opposition to authority. The peace of 1763, after a war of immense expence, was crowned by the cession of Canada,

HISTORICAL
EPOCHS.

nada, and the consequent annihilation of the French power in North America. Canada was acquired at the price of about fifty times its real value: and the acquisition of Canada was the loss of America: so incapable is human prudence of presaging events, and so often does Providence effect objects by the very means which men employ to avert them! For the colonies were not only thus delivered from constant fear and jealousy of the French, which bound them to the protection of the parent country, but the vast expenditure of that splendid and absurd war occasioned such an increase of taxation, that the country gentlemen of England were easily induced to wish that a part of it might be borne by the colonies.

1. The Stamp Act, passed in 1765, is considered as the first attempt to raise a supply of British revenue from North America; but by the firm opposition of the colonies it was repealed in 1766. Similar attempts of a more oblique nature were alike unsuccessful: and in 1770 the duties were taken off, except threepence a pound on tea, which, within the space of half a century, had become a necessary of life.

2. In 1773 an armed schooner stationed off Rhode Island was burnt by the Americans, the first act of open outrage.

3. The tea sent by the East India Company to the port of Boston in New England was thrown into the sea by seventeen persons in the disguise of American savages. This led to what is called the Boston Port Bill, March 1774, and the act for altering the government of Massachusetts Bay.

4. Deputies met at Philadelphia, 26th October 1774, constituting the first Congress, of which Peyton Randolph was the President; but independence was not yet asserted. Some military manœuvres of the British General Gage increased the ferment; and a provincial congress, presided by Mr. Hancock, assembled at Concord, nineteen miles from Boston.

5. Other acts of the British Parliament, 1775, inflamed the discontents; and the civil war commenced with a skirmish between the British troops and American militia at Lexington. The battle of Bunker's Hill, or rather Breed's Hill, according to Dr. Morse, near Charlestown, was fought on the 17th June 1775. Two days before, the American

congress had appointed Washington commander of their armies; who in March 1776 entered Boston in triumph. HISTORICAL
EPOCHS.

6. On the 4th of July 1776 the American congress published their solemn declaration of independence.

7. On the 30th January 1778 the king of France concluded a treaty with the United States. The surrender of General Burgoyne's army, 17th October 1777, is supposed to have greatly influenced this alliance.

8. The surrender of lord Cornwallis on the 19th October 1781.

9. The treaty of peace, 30th November 1782, by which the independence of the United States was solemnly acknowledged, after a struggle of seven years; while that between Spain and the United Provinces continued, with some intermissions, for about sixty years: but the profuse expence of modern warfare counterbalances its brevity.

10. The constitution of the United States having been found imperfect, a new plan was submitted to the several states, and received their approbation. On the 30th of April 1789, George Washington was inaugurated president of the United States. The resignation and death of that illustrious man, and the short contest with the venal Directory of France, terminated by Bonaparte, who, like all great minds, prefers glory to money, are incidents which are fresh in the memory of every reader.*

The celebrated Washington was followed in the presidency by Adams, who was inaugurated on the 4th of March 1797. His successor in 1801 was Mr. Jefferson, a man of science and taste, and an ardent friend of liberty and humanity.

* Dr. Morfe's political prophecy is a pleasing speculation on the future condition of the United States. "Here the sciences and the arts of civilized life are to receive their highest improvements: here civil and religious liberty are to flourish, unchecked by the cruel hand of civil or ecclesiastical tyranny: here genius, aided by all the improvements of former ages, is to be exerted in humanizing mankind, in expanding and enriching their minds with religious and philosophical knowledge, and in planning and executing a form of government which shall involve all the excellencies of former governments, with as few of their defects as is consistent with the imperfection of human affairs, and which shall be calculated to protect and unite, in a manner consistent with the natural rights of mankind, the largest empire that ever existed." P. 569.

CHAPTER II.

POLITICAL GEOGRAPHY.

Religion. — Government. — Laws. — Population. — Army. — Navy. — Revenue. — Political Importance.

RELIGION.

THE religion of the United States of America is the reformed system of Christianity; but every sect is liberally treated with universal toleration, or rather equal independence. Some idea of the prevalent sects may be taken from the statement of Dr. Morfe, who enumerates those of Massachusetts in the following order:

Denominations.	Number of Congregations.	Supposed number of each denomination.
Congregationalists,*	400	277,600
Baptists,	84	58,296
Episcopalians,	16	11,104
Friends, or Quakers,	10	6,940
Presbyterians,	4	2,776
Universalists,	2	1,388
Roman Catholics,	1	694
	517	358,798

In Philadelphia the places of public worship are thus numbered:

The Friends, or Quakers,	5	The Swedish Lutherans,	1
The Presbyterians and Seceders,	6	The Moravians,	1
The Episcopalians,	3	The Baptists,	1
The German Lutherans,	2	The Universal Baptists,	1
The German Calvinists,	1	The Methodists,	1
The Catholics,	4	The Jews,	1

As the state of religion in a free country of universal toleration † may prove extremely interesting to many readers, the account given by Dr.

* These are moderate independents, who suppose that each congregation possesses complete ecclesiastic power, but profess strict amity with other congregations.

† Even this word may be objectionable, as the government acknowledges no particular religion whatever, and where all are alike none is *tolerated*.

Morfe,

Morse, which is very particular and instructive, shall here be transcribed, RELIGION.
the sentiments of an American upon a subject of such delicacy having a
claim to superior attention:—

“ The constitution of the United States provides against the making
of any law respecting an establishment of religion, or prohibiting the
free exercise of it. And in the constitutions of the respective states re-
ligious liberty is a fundamental principle. In this important article, our
government is distinguished from that of every other nation, if we ex-
cept France. Religion is here placed on its proper basis; without the
feeble and unwarranted aid of the civil power, it is left to be supported
by its own evidence, by the lives of its professors, and the almighty care
of its Divine Author.

“ All being thus left at liberty to choose their own religion, the
people, as might easily be supposed, have varied in their choice. The
bulk of the people would denominate themselves Christians; a small
proportion of them are Jews; some plead the sufficiency of natural re-
ligion, and reject revelation as unnecessary and fabulous; and many,
we have reason to believe, have yet their religion to choose. Christians
profess their religion under various forms, and with different ideas of
its doctrines, ordinances, and precepts. The following denominations
of Christians are more or less numerous in the United States, viz. Con-
gregationalists, Presbyterians, Dutch Reformed Church, Episcopalians,
Baptists, Quakers or Friends, Methodists, Roman Catholics, German
Lutherans, German Calvinists or Presbyterians, Moravians, Tunkers,
Mennonists, Universalists, and Shakers.

“ Of these the Congregationalists are the most numerous. In New
England alone, besides those which are scattered through the middle and
southern states, there are not less than 1000 congregations of this deno-
mination, viz.

“ In New Hampshire	-	-	-	200
Massachusetts	-	-	-	440
Rhode Island	-	-	-	13
Connecticut	-	-	-	197
Vermont (say)	-	-	-	150
Total				1000

“ It

RELIGION.

" It is difficult to say what is the present ecclesiastical constitution of the Congregational Churches: formerly their ecclesiastical proceedings were regulated in Massachusetts, by the Cambridge Platform of church discipline, established by the synod in 1649; and in Connecticut, by the Saybrook Platform of discipline; but since the revolution, less regard has been paid to these constitutions, and in many instances they are wholly disused. Congregationalists are pretty generally agreed in this opinion, that ' Every church or particular congregation of visible saints, in gospel order, being furnished with a pastor or bishop, and walking together in truth and peace, has received from the Lord Jesus full power and authority ecclesiastical within itself, regularly to administer all the ordinances of Christ, and is not under any other ecclesiastical jurisdiction whatsoever.' Their churches, with some exceptions, disclaim the word *Independent*, as applicable to them, and claim a sisterly relation to each other.

" From the answer of the elders and other messengers of the churches assembled at Boston, in the year 1662, to the questions proposed to them by order of the General Court, it appears that the churches, at that period, professed to hold communion with each other in the following acts, viz.

" 1. In hearty care and prayer one for another. 2. In affording relief, by communicating of their gifts in temporal or spiritual necessities. 3. In maintaining unity and peace, by giving account one to another of their public actions, when it is properly desired; to strengthen one another in their regular administrations; in particular by a concurrent testimony against persons justly censured. 4. To seek and accept help from, and afford help to each other, in case of divisions and contentions, whereby the peace of any church is disturbed; in matters of more than ordinary importance, as the ordination, installation, removal and depositions of pastors or bishops; in doubtful and difficult questions and controversies, doctrinal or practical, that may arise; and for the rectifying of mis-administration, and healing of errors and scandals that are not healed among themselves. 5. In taking notice, with a spirit of love and faithfulness, of the troubles and difficulties, errors and scandals of another church, and to administer help (when the case manifestly calls for

for it), though they should so neglect their own good and duty as not to seek it. 6. In admonishing one another, when there is cause for it; and after a due course of means, patiently to withdraw from a church or peccant party therein, obstinately persisting in error or scandal.

"A consociation of churches was, at the period mentioned, considered as necessary to a communion of churches, (the former being but an agreement to maintain the latter), and therefore a duty. The consociation of churches they defined to be, 'their mutual and solemn agreement to exercise communion in such acts as aforesaid (meaning the acts of communion above recited) amongst themselves, with special reference to those churches which, by Providence, are planted in a convenient vicinity, though with liberty reserved, without offence, to make use of others, as the nature of the case or the advantage of the opportunity may lead thereunto.'

"The ministers of the Congregational order are pretty generally associated for the purposes of licensing candidates for the ministry, and friendly intercourse and improvement; but there are few Congregational churches that are consociated on the above principles; and the practice has very generally gone into disuse, and with it the communion of churches in most of the acts above recited. In Connecticut and the western parts of Massachusetts, the churches have deviated less from their original constitution. The degeneracy of the Congregational churches from that order, fellowship, and harmony, in discipline, doctrines, and friendly advice and assistance in ecclesiastical matters, which formerly subsisted between them, is matter of deep regret to many, not to say to most people of that denomination. A reformation, or a return to a practice conformable to the original principles of the Congregational churches, is an event more earnestly desired than confidently expected.

"Congregationalists are divided in opinion respecting the doctrines of the gospel, and the proper subjects of ordinances. The body of them are Calvinists; a respectable proportion are what may be denominated Hopkensian Calvinists: besides these, some are Arminians, some Arians, a few Socinians, and a number who have adopted Dr. Chauncy's scheme of the final salvation of all men.*

* The reader will find a well digested summary of the peculiar sentiments of each of these sects in H. Adams's "View of Religions."

"Next:

RELIGION.

" Next to the Congregationalists, PRESBYTERIANS are the most numerous denomination of Christians in the United States. They have a constitution by which they regulate all their ecclesiastical proceedings, and a confession of faith, which all church officers and church members are required to subscribe. Hence they have preserved a singular uniformity in their religious sentiments, and have conducted their ecclesiastical affairs with a great degree of order and harmony.

" The body of the Presbyterians inhabit the middle and southern states, and are united under the same constitution. By this constitution, the Presbyterians who are governed by it are divided into five synods and seventeen presbyteries, viz. Synod of New York, 5 presbyteries, 94 congregations, 61 settled ministers. 2 Synod of Philadelphia, 5 presbyteries, 92 congregations, 60 settled ministers, besides the ministers and congregations belonging to Baltimore presbytery. 3. Synod of Virginia, 4 presbyteries, 70 congregations, 40 settled ministers, exclusive of the congregations and ministers of Transylvania presbytery. 4. Synod of the Carolinas, 3 presbyteries, 82 congregations, 42 settled ministers, the ministers and congregations in Abington presbytery not included. If we suppose the number of congregations in the presbyteries which made no returns to their synods to be 100, and the number of settled ministers in the same to be 40, the whole number of presbyterian congregations in this connection will be 438, which are supplied by 223 settled ministers, and between 70 and 80 candidates, besides a number of ordained ministers, who have no particular charges. Each of the four synods meets annually; besides which they have a joint meeting, by their commissioners, once a year, in General Assembly at Philadelphia.

" The Presbyterian churches are governed by congregational, presbyterial, and synodical assemblies: these assemblies possess no civil jurisdiction, their power is wholly moral or spiritual, and that only ministerial or declarative. They possess the right of requiring obedience to the laws of Christ, and of excluding the disobedient from the privileges of the church; and the powers requisite for obtaining evidence and inflicting censure; but the highest punishment to which their authority extends, is to exclude the contumacious and impenitent from the congregation of believers.

" The

"The *Church Session*, which is the congregational assembly of judi- RELIGION.
 catory, consists of the minister or ministers and elders of a particular congregation. This body is invested with the spiritual government of the congregation, and has power to enquire into the knowledge and christian conduct of all its members; to call before it offenders and witnesses of its own denomination; to admonish, suspend, or exclude from the sacraments, such as deserve these censures; to concert measures for promoting the spiritual interests of the congregation, and to appoint delegates to the higher judicatories of the church.

"A *Presbytery* consists of all the ministers, and one ruling elder from each congregation, within a certain district. Three ministers and three elders, constitutionally convened, are competent to do business. This body has cognizance of all things that regard the welfare of the particular churches within its bounds, which are not cognizable by the session: also a power of receiving and issuing appeals from the sessions; of examining and licensing candidates for the ministry; of ordaining, settling, removing, or judging ministers; of resolving questions of doctrine or discipline; of condemning erroneous opinions, that injure the purity or peace of the church; of visiting particular churches, to inquire into their state and redress the evils that may have arisen in them; of uniting or dividing congregations, at the request of the people, and whatever else pertains to the spiritual concerns of the churches under their care.

"A *Synod* is a convention of several presbyteries. The synod has power to admit and judge of appeals, regularly brought up from the presbyteries; to give its judgment on all references of an ecclesiastical kind; to correct and regulate the proceedings of presbyteries; to take effectual care that presbyteries observe the constitution of the church, &c.

"The highest judicatory of the Presbyterian church is styled *The General Assembly of the Presbyterian Church in the United States of America*. This grand Assembly is to consist of an equal delegation of bishops and elders from each presbytery within their jurisdiction, by the title of *Commissioners to the General Assembly*. Fourteen commissioners make a quorum. The General Assembly constitutes the bond of union, peace, correspondence, and mutual confidence among all their churches,

RELIGION, and has power to receive and issue all appeals and references which may regularly be brought before them from inferior judicatories; to regulate and correct the proceedings of the synods, &c. To the General Assembly also belongs the power of consulting, reasoning, and judging in controversies respecting doctrine and discipline; of reproof, warning or bearing testimony against error in doctrine, or immorality in practice in any church, presbytery, or synod; of corresponding with foreign churches; of putting a stop to schismatical contentions and disputations; and in general of recommending and attempting reformation of manners, and of promoting charity, truth, and holiness in all the churches; and also of erecting new synods when judged necessary.

"The confession of faith adopted by the Presbyterian church embraces what are called the Calvinistic doctrines; and none who disbelieve these doctrines are admitted into fellowship with their churches. The General Assembly of the Presbyterian church holds a friendly correspondence with the General Association in Connecticut by letter, and by admitting delegates from their respective bodies to sit in each others general meetings.

"Disconnected with the churches of which we have been speaking, there are four small presbyteries in New England, who have a similar form of ecclesiastical government and discipline, and profess the same doctrines.

"Besides these there is the "Associate Presbytery of Pennsylvania," having a separate ecclesiastical jurisdiction in America, and belonging to the Associate Synod of Edinburgh, which they declare is the only ecclesiastical body, either in Britain or America, with which they are agreed concerning the doctrine and order of the church of Christ, and concerning the duty of confessing the truth, and bearing witness to it by a public testimony against the errors of the times. This connection is not to be understood as indicating subjection to a foreign jurisdiction; but is preserved for the sake of maintaining unity with their brethren in the profession of the Christian faith, and such an intercourse as might be of service to the interests of religion. This sect of Presbyterians is commonly known by the name of *Seceders*, on account of their seceding from the national church in Scotland, 1736.*

* See H. Adams's "View of Religions," Article, *Seceders*.

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"The DUTCH REFORMED churches in the United States, who maintain the doctrine of the synod of Dort, held in 1618, are between 70 and 80 in number, constituting six classes, which form one synod, styled, 'The Dutch Reformed Synod of New York and New Jersey.' The classes consist of ministers and ruling elders; each class delegates two ministers and an elder to represent them in synod. From the first planting of the Dutch churches in New York and New Jersey, they have, under the direction of the classes of Amsterdam, been formed exactly upon the plan of the established church of Holland, as far as that is ecclesiastical. A strict correspondence is maintained between the Dutch Reformed Synod of New York and New Jersey and the synod of North Holland and the classes of Amsterdam. The acts of their synods are mutually exchanged every year, and mutual advice is given and received in disputes respecting doctrinal points and church discipline.*

"The PROTESTANT EPISCOPAL Church in the United States (the churches of that denomination in New England excepted) met in convention at Philadelphia, October 1785, and revised the book of common prayer, and administration of the sacraments, and other rites and ceremonies, with a view to render the liturgy consistent with the American Revolution. But this revised form was adopted by none of the churches except one or two in Philadelphia.

"In October 1789, at another meeting of their convention, a plan of Union among all the Protestant Episcopal churches in the United States of America was agreed upon and settled; and an adequate representation from the several states being present, they again revised the book of common prayer, which is now published and generally adopted by their churches. They also agreed upon and published seventeen

* In the state of New York the church service is sometimes performed in Dutch, a great part of the inhabitants being of Dutch extraction, but that language is no where taught, and will probably soon be extinct. The clergy of this state are chiefly Calvinists, and their salary in the country seldom exceeds a hundred and fifty pounds a year, so that to support their families they are often forced to become farmers or schoolmasters, or even to embrace some mechanical occupation. A learned clergyman lately resident there found them rather ignorant, and of course piously contending against all human learning. They reject moral discourses, while they admit political discussions into the pulpit. Some of them regard dancing as a crime, but suppose that want of charity is a virtue.

RELIGION. canons for the government of their church; the first of which declares, that 'there shall, in this church, be three orders in the ministry, viz. Bishops, Priests, and Deacons.'

"At the same time they agreed upon a constitution, which provides that there shall be a general convention of the Protestant Episcopal Church in the United States, on the second Tuesday of September, of every third year from 1789. That each state is intitled to a representation of both the clergy and laity, or either of them, and may send deputies, not exceeding four of each order, chosen by the convention of the state. That the bishops of the church, when three or more are present, shall, in their general conventions, form a separate house, with a right to originate and propose acts for the concurrence of the house of deputies, composed of clergy and laity; and with a power to negative acts passed by the house of deputies, unless adhered to by four-fifths of the other house. That every bishop shall confine the exercise of his episcopal office to his proper diocese or district. That no person shall be admitted to holy orders until examined by the bishop and two presbyters, having produced the requisite testimonials: and that no person shall be ordained until he shall have subscribed the following declaration: 'I do believe the Holy Scriptures of the Old and New Testament to be the Word of God, and to contain all things necessary to salvation; and I do solemnly engage to conform to the doctrines and worship of the Protestant Episcopal Church in the United States.'

"They have not yet adopted any articles of religion other than those contained in the apostles and Nicene creeds. The number of Episcopal churches in the United States is not ascertained; in New England there are between forty and fifty, but in the southern states they are much more numerous. Four bishops, viz. of Connecticut, New York, Pennsylvania, and Virginia, have been elected by the conventions of their respective states, and have been duly consecrated. The former by the bishops of the Scotch church, the three latter by the bishops of the English church. And these four, in September 1792, united in the consecration of a fifth, elected by the convention of the state of Maryland.

" The BAPTISTS, with some exceptions, are upon the Calvinistic plan as to doctrines, and Independents as to church government and discipline. Except those who are styled '*Open Communion Baptists*,' of whom there is but one association, they refuse to communicate in the ordinance of the Lord's Supper with other denominations; because they hold that immersion only is the *true* baptism, and that baptism is necessary to communion; it is, therefore, improper and inconsistent, in their opinion, to admit *unbaptized* persons (as all others are, in their view, but themselves) to join with them in this ordinance, though they allow ministers of other denominations to preach to their congregations, and sometimes to assist in ordaining their ministers.

" From an account taken by a preacher * of the baptist denomination, who has travelled through the United States to ascertain their number and condition, we are enabled to give the following account of their associations, churches, ministers, church members, and principles:—

States.	Churches.	MINISTERS.		Members.
		Ordained.	Licensed.	
New Hampshire	32	23	17	1732
Massachusetts	107	95	31	7116
Rhode Island	38	37	39	3502
Connecticut	55	44	21	3214
Vermont	34	21	15	1610
New York	57	53	30	3987
New Jersey	26	20	9	2279
Pennsylvania	28	26	7	1231
Delaware	7	9	1	409
Maryland	12	8	3	776
Virginia	207	157	109	20,157
Kentucky	42	40	21	3105
Western Territory	1			30
North Carolina	94	81	76	7742
Deceded Territory	18	15	6	889
South Carolina	68	48	28	4012
Georgia	42	33	9	3184
Total	868	710	422	64,975

* Mr. John Asplund.

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RELIGION. Of these are,

	Assoc.	Churches.	MINISTERS.		Members.
			Ordained.	Licenc'd.	
Six principal Baptists	1	18	26	4	1599
Open Communion ditto	1	15	13	4	1714
General Provision ditto	5	30	26	19	1948
Seventh Day ditto	—	10	13	3	887
Regular or Particular ditto	30	795	632	392	58,827
Total	35	868	710	422	64,675

" To this account the compiler conjectures that 1500 members and 30 churches ought to be added; making the whole number of churches about 900, and the members about 66,000. He supposes, moreover, that at least *three times* as many attend their meetings as have joined their churches; which, if we suppose all who attend their meetings are in principle Baptists, will make the whole number of that denomination in these States 198,000, or a twenty-sixth part of the inhabitants.

" Some of the leading principles of the Regular or Particular Baptists are,—The imputation of Adam's sin to his posterity; the inability of man to recover himself; effectual calling by sovereign grace; justification by the imputed righteousness of Christ; immersion for baptism, and that on profession of faith and repentance; congregational churches, and their independency, and reception into them upon evidence of sound conversion.

" We shall next speak of the people called *QUAKERS*.* This denomination of christians arose about the year 1648. They were first collected into religious societies by their highly respected elder, George Fox. They came to America as early as 1656. The first settlers of Pennsylvania were all of this denomination; and the number of Friends' meetings in the United States, at present, is about 320.

" Their doctrinal tenets may be summarily expressed as follows: In common with other christians, they believe in one eternal God, and in

* They received their appellation from this circumstance: In the year 1650, George Fox, being brought before two justices in Derbyshire, one of them, scoffing at him for having bidden him and those about him to *tremble* at the word of the Lord, gave to him and his followers the name of *Quakers*; a name by which they have since been usually denominated: but they themselves adopted the appellation of *Friends*.

Jesus Christ the Messiah and Mediator of the new covenant. To Christ RELIGION.
alone, in whose divinity they believe, they give the title of the *Word*
of God, and not to the Scriptures; yet they profess a high esteem for
these sacred writings, in subordination to the Spirit who indited them,
and believe that they are able, through faith, to make wise to salvation.
They reverence the excellent precepts of scripture, and believe them
practicable and binding on every christian; and that in the life to come,
every man will be rewarded according to his works. In order to enable
mankind to put in practice these precepts, they believe that every man
coming into the world is endued with a measure of the light, grace, or
good spirit of Christ, by which he is enabled to distinguish good from
evil, and correct the disorderly passions and corrupt propensities of his
nature, which mere reason is altogether insufficient to overcome: that
this divine grace is, to those who sincerely seek it, an all-sufficient and
present help in time of need; and that by it the snares of the enemy
are detected, his allurements avoided, and deliverance experienced,
through faith in its effectual operation, and the soul translated out of
the kingdom of darkness into the marvellous light and kingdom of the
Son of God. Thus persuaded, they think this divine influence espe-
cially necessary to the performance of the highest act of which the
human mind is capable, the worship of God in spirit and in truth; and
therefore consider, as obstructions to pure worship, all forms which
divert the mind from the secret influence of this unction of the Holy
One. Though true worship is not confined to time or place, they
believe it is incumbent on churches to meet often together, but dare not
depend for acceptance on a formal repetition of the words and experi-
ences of others. They think it is their duty to wait in silence, to have
a true sight of their condition bestowed on them; and believe even a
single sigh, arising from a sense of their infirmities and need of divine
help, to be more acceptable to God, than any performances which ori-
ginate in the will of man.

" They believe the renewed assistance of the light and power of
Christ, which is not at our command, nor attainable by study, but the
free gift of God, to be indispensably necessary to all true ministry.
Hence arises their testimony against preaching for hire, and conscien-

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RELIGION. tious refusal to support such ministry by tythes or other means. As they dare not encourage any ministry, but such as they believe to spring from the influence of the Holy Spirit, so neither dare they attempt to restrain this influence to persons of any condition in life, or to the male sex, but allow such of the female sex, as appear to be qualified, to exercise their gifts for the general edification of the church.

" They hold, that as there is one Lord and one faith, so his baptism is one in nature and operation, and that nothing short of it can make us living members of his mystical body; and that baptism with water belonged to an inferior and decreasing dispensation. With respect to the Lord's Supper, they believe that communication between Christ and his church is not maintained by that nor any other external ordinance, but only by a real participation of his divine nature, through faith: that this is the supper alluded to, Rev. iii. 20; and that where the substance is attained, it is unnecessary to attend to the shadow.

" Believing that the grace of God is alone sufficient for salvation, they can neither admit that it is conferred on a few only, while others are left without it; nor, thus asserting its universality, can they limit its operation to a partial cleansing of the soul from sin, even in this life. On the contrary, they believe that God doth vouchsafe to assist the obedient to submit to the guidance of his pure Spirit, through whose assistance they are enabled to bring forth fruits unto holiness, and to stand *perfect* in their present rank.

" As to oaths, they abide literally by Christ's positive injunction, ' Swear not at all.' They believe that ' wars and fightings' are, in their origin and effects, utterly repugnant to the gospel, which still breathes peace and good will to men.* They also are firmly persuaded, that if the benevolence of the gospel were generally prevalent in the minds of men, it would effectually prevent them from oppressing,

* During the late war, some of their number, contrary to this article of their faith, thought it their duty to take up arms in defence of their country. This laid the foundation of a secession from their brethren, and they now form a separate congregation in Philadelphia, by the name of the " Resisting, or Fighting Quakers."

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much more from enslaving * their brethren, of whatever complexion ; RELIGION. and would even influence their treatment of the brute creation, which would no longer groan the victims of their avarice, or of their false ideas of pleasure. They profess that their principles, which inculcate submission to the laws in all cases wherein conscience is not violated, are a security to the salutary purposes of government. But they hold, that the civil magistrate has no right to interfere in matters of religion, and think persecution in any degree unwarrantable. They reject the use of those names of the months and days, which, having been given in honour of the heroes or gods of the heathen, originated in their flat-tery or superstition ; and the custom of speaking to a single person in the plural number, as having arisen also from motives of adulation. Compliments, superfluity of apparel or furniture, outward shews of rejoicing or mourning, and observations of days and times, they deem incompatible with the simplicity and sincerity of a christian life ; and they condemn public diversions, gaming, and other vain amusements of the world. They require no formal subscription to any articles, either as the condition of membership, or to qualify for the service of the church.

“ To effect the salutary purposes of discipline, monthly, quarterly, and yearly meetings are established. A monthly meeting is composed of several neighbouring congregations. Its business is to provide for the subsistence of the poor, and for the education of their offspring ; to judge of the sincerity and fitness of persons appearing to be convinced of the religious principles of the society, and desiring to be admitted to membership ; to excite due attention to the discharge of religious and moral duties ; to deal with disorderly members ; to appoint overseers to see that the rules of their discipline are put in practice ; to allow of marriages, &c. †

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* In the present war of liberality and humanity, against avarice and cruelty, in defence of the blacks, the Quakers have had the signal honour of having first set the illustrious example.

† Their mode of marrying is as follows :—Those who intend to marry appear together, and propose their intention to the monthly meeting, and if not attended by their parents or guardians, produce a written certificate of their consent, signed in the presence of witnesses. The meeting then appoints a committee to inquire whether they are clear of other engagements respecting marriage ; and if at a subsequent meeting, to which the parties also come and declare the continuance

RELIGION.

" A quarterly meeting is composed of several monthly meetings. At this meeting are produced written answers from monthly meetings, to certain questions respecting the conduct of their members and the meeting's care over them. The accounts thus received are digested and sent by representatives to the yearly meeting. Appeals from the judgment of monthly meetings are brought to the quarterly meetings.

" The yearly meeting has the general superintendence of the society in the country in which it is established.* The business of this meeting is to give forth its advice, make such regulations as appear to be requisite, or excite to the observance of those already made, &c. Appeals from the judgment of quarterly meetings are here finally determined, and a brotherly correspondence, by epistles, is maintained with other yearly meetings.

" As they believe women may be rightly called to the work of the ministry, they also think they may share in their christian discipline. Accordingly *they* have monthly, quarterly, and yearly meetings of their own sex, held at the same time, and in the same place with those of the men; but separately, and without the power of making rules.

" Their elders and ministers have meetings peculiar to themselves. These meetings, called meetings of ministers and elders, are generally held in the compass of each monthly, quarterly, and yearly meeting, for the purposes of exciting each other to the discharge of their several duties; of extending advice to those who may appear weak, &c. They also, in the intervals of the yearly meetings, give certificates to those ministers who travel abroad in the work of the ministry.

" The yearly meeting held in London, 1675, appointed a meeting to be held in that city, for the purpose of advising or assisting in cases

of their intention, no objections are reported, they have the meeting's consent to solemnize their intended marriage." This is done in a public meeting for worship, towards the close of which the parties stand up and solemnly take each other for husband and wife. A certificate of the proceedings is then publicly read, and signed by the parties, and afterwards by the relations and others as witnesses, which closes the solemnity.

* The Quakers have, in all, *seven* yearly meetings. One in London, to which come representatives from Ireland. The other six are in the United States. 1. New England. 2. New York. 3. New Jersey and Pennsylvania. 4. Maryland. 5. Virginia. 6. The Carolinas and Georgia.

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of suffering for conscience sake, called a meeting for sufferings, which is yet continued. It is composed of Friends, under the name of correspondents, chosen by the several quarterly meetings, who reside in and near the city. This meeting is entrusted with the care of printing and distributing books, and with the management of its stock, and considered as a standing committee of the yearly meeting. In none of their meetings have they a president, as they believe Divine Wisdom alone ought to preside; nor has any member a right to claim pre-eminence over the rest.

"The METHODIST denomination of christians arose in England in 1739, and made their first appearance in America about twenty-four years since. Their general style is, 'The United Societies of the Methodist Episcopal Church.' They profess themselves to be 'a company of men, having the form and seeking the power of godliness, united in order to pray together, to receive the word of exhortation, and to watch over one another in love, that they may help each other to work out their own salvation.' Each society is divided into classes of twelve persons, one of whom is styled *the Leader*, whose business it is to see each person in his class once a week, in order to inquire how their souls prosper, to advise, reprove, comfort or exhort, as occasion may require; and to receive contributions for the relief of the church and poor. In order to admission into their societies, they require only one condition, viz. 'A desire to flee from the wrath to come; i. e. a desire to be saved from their sins.' It is expected of all who continue in their societies, that they should evidence their desire of salvation, by doing no harm, by avoiding all manner of evil, by doing all manner of good, as they have ability and opportunity, especially to the household of faith; employing them preferably to others, buying of one another (unless they can be served better elsewhere), and helping each in business. And also by attending upon all the ordinances of God; such as public worship, the supper of the Lord, family and private prayer, searching the scriptures, and fasting or abstinence. The late celebrated Mr. John Wesley is considered as the father of this class of Methodists, who, as they deny some of the leading Calvinistic doctrines, and hold some of the peculiar tenets of Arminius, may be called *Arminian Methodists*. The famous

RELIGION. Mr. Whitfield was the leader of the *Calvinistic Methodists*, numerous in England, and a few in different parts of the United States, who are patronized and supplied with ministers by the will of the late Lady Huntingdon.

" In 1788, the number of *Wesleian Methodists* in the United States stood in the following manner:—

Georgia	-	-	-	-	2011
South Carolina	-	-	-	-	3366
North Carolina	-	-	-	-	6779
Virginia	-	-	-	-	14,356
Maryland	-	-	-	-	11,017
Delaware and Pennsylvania	-	-	-	-	1998
New Jersey	-	-	-	-	1751
New York	-	-	-	-	2004

Total 43,265

" Since this estimate of their numbers was taken, some few scattered societies have been collected in different parts of the New England States, and their numbers increased in other parts; so that in 1790, the whole connection amounted to 57,621. To superintend the Methodist connection in America, they had, in 1788, two bishops, 30 elders, and 50 deacons.

" In Great Britain and Ireland, the whole number of persons in full connection with the Methodist Episcopal church amounted, in 1790, to 71,568.

" The whole number of ROMAN CATHOLICS in the United States is estimated at about 50,000, one half of which are in the state of Maryland. Their peculiar and leading doctrines and tenets are too generally known to need a recital here. They have a bishop, who resides in Baltimore, and many of their congregations are large and respectable.

" The German inhabitants in these states, who principally belong to Pennsylvania and New York, are divided into a variety of sects; the principal of which are Lutherans, Calvinists or Presbyterians, Moravians, Tunkers, and Mennonists. Of these the German Lutherans are the most numerous. Of this denomination, and the German Presbyterians

terians or Calvinists, who are next to them in numbers, there are upwards of 60 ministers in Pennsylvania; and the former have twelve, and the latter six churches in the state of New York. Many of their churches are large and splendid, and in some instances furnished with organs. These two denominations live together in the greatest harmony, often preaching in each others churches, and sometimes uniting in the erection of a church, in which they alternately worship.

"The MORAVIANS are a respectable body of christians in these states. Of this denomination there were, in 1788, about 1300 souls in Pennsylvania; viz. at Bethlehem, between 5 and 600, which number has since increased; at Nazareth, 450; at Litiz, upwards of 300. Their other settlements, in the United States, are at Hope, in New Jersey, about 100 souls; at Wachovia, on Yadkin river, North Carolina, containing six churches. Besides these regular settlements, formed by such only as are members of the brethren's church, and live together in good order and harmony, there are, in different parts of Pennsylvania, Maryland, and New Jersey, and in the cities of Newport (Rhode Island), New York, Philadelphia, Lancaster, York Town, &c. congregations of the brethren, who have their own church and minister, and hold the same principles and doctrinal tenets, and church rites and ceremonies, as the former, though their local situation does not admit of such particular regulations as are peculiar to the regular settlements.

"They call themselves 'The *United Brethren of the Protestant Episcopal Church*.' They are called Moravians, because the first settlers in the English dominions were chiefly emigrants from Moravia. These were the remnant and genuine descendants of the church of the ancient United Brethren, established in Bohemia and Moravia as early as the year 1456. About the middle of the last century they left their native country to avoid persecution, and to enjoy liberty of conscience, and the true exercise of the religion of their forefathers. They were received in Saxony, and other protestant dominions, were encouraged to settle among them, and were joined by many serious people. They adhere to the Augustan Confession of Faith, which was drawn up by protestant divines at the time of the reformation in Germany in the year 1530, and presented at the diet of the empire at Augsburg; and which, at that time,

RELIGION.

RELIGION. time, contained the doctrinal system of all the established protestant churches. They retain the discipline of their ancient church, and make use of Episcopal ordination, which has been handed down to them in a direct line of succession for more than three hundred years.*

" They profess to live in strict obedience to the ordinances of Christ; such as the observation of the sabbath, infant baptism, and the Lord's supper; and in addition to these, they practise the foot washing, the kiss of love, and the use of the lot.

" They were introduced into America by Count Zinzendorf, and settled at Bethlehem, which is their principal establishment in America, as early as 1741. Regularity, industry, ingenuity, and economy, are characteristics of these people.

" The TUNKERS are so called in derision, from the word *tunken*, to put a morsel in sauce. The English word that conveys the proper meaning of Tunkers, is *sops*, or *dippers*. They are also called Tumblers, from the manner in which they perform baptism, which is by putting the person, while kneeling, head first under water, so as to resemble the motion of the body in the action of tumbling. The Germans sound the letters *t* and *b* like *d* and *p*; hence the words Tunkers and Tumblers have been corruptedly written Dunkers and Dumpers.

" The first appearance of these people in America was in the year 1719, when about twenty families landed in Philadelphia, and dispersed themselves in various parts of Pennsylvania. They are what are called General Baptists, and believe in general redemption and general salvation. They use great plainness of dress and language, and will neither swear, nor fight, nor go to law, nor take interest for the money they lend. They commonly wear their beards; keep the first day sabbath, except one congregation; have the Lord's supper, with its ancient attendants of love feasts, with washing of feet, kiss of charity, and right hand of fellowship. They anoint the sick with oil for their recovery,

* See David Crantz' Hist. of " The ancient and modern United Brethren's Church, translated from the German, by the Rev. Benjamin La Trobe." London, 1780. Those who wish to obtain a thorough and impartial knowledge of their religious sentiments and customs, may see them summed up in a plain but nervous style, in " An Exposition of Christian Doctrine, as taught in the Protestant Church of the United Brethren," written in German, by A. G. Spangenberg, and translated and published in English in 1784.

and

and use the trine immersion, with laying on of hands and prayer, even while the person baptized is in the water. Their church government and discipline are the same with those of the English Baptists, except that every brother is allowed to speak in the congregation, and their best speaker is usually ordained to be their minister. They have deacons, deaconesses (from among their ancient widows), and exhorters, who are all licensed to use their gifts stately. On the whole, notwithstanding their peculiarities, they appear to be humble, well-meaning christians, and have acquired the character of the *harmless* Tunkers.

“ Their principal settlement is at Ephrata, sometimes called Tunkers-town, in Lancaster county, sixty miles westward of Philadelphia. It consists of about forty buildings, of which three are places of worship: one is called Sharon, and adjoins the sisters’ apartment as a chapel; another, belonging to the brothers’ apartment, is called Bethany. To these the brethren and sisters resort, separately, to worship, morning and evening, and sometimes in the night. The third is a common church, called Zion, where all in the settlement meet once a week for public worship. The brethren have adopted the White Friars dress, with some alterations; the sisters that of the nuns; and both, like them, have taken the vow of celibacy. All, however, do not keep the vow. When they marry, they leave their cells and go among the married people. They subsist by cultivating their lands, by attending a printing-office, a grist mill, a paper mill, an oil mill, &c. and the sisters by spinning, weaving, sewing, &c. They at first slept on board couches, but now on beds, and have otherwise abated much of their former severity. This congregation keep the seventh day sabbath. Their singing is charming, owing to the pleasantness of their voices, the variety of parts, and the devout manner of performance. Besides this congregation at Ephrata, there were, in 1770, fourteen others in various other parts of Pennsylvania, and some in Maryland. The whole, exclusive of those in Maryland, amounted to upwards of 2000 souls.

“ The MENNONISTS derive their name from Menno Simon, a native of Witmars, in Germany, a man of learning, born in the year 1505. In the time of the reformation by Luther and Calvin, he was a famous Roman Catholic preacher, till about the year 1535, when he became a

Baptist.

RELIGION. Baptist. Some of his followers came into Pennsylvania from New York, and settled at German-town, as early as 1692. This is at present their principal congregation, and the mother of the rest. Their whole number, in 1770, in Pennsylvania, was upwards of 4000, divided into thirteen churches and forty-two congregations, under the care of fifteen ordained ministers, and fifty-three licensed preachers.

"The Mennonists do not, like the Tunkers, hold the doctrine of general salvation; yet, like them, they will neither swear nor fight, nor bear any civil office, nor go to law, nor take interest for the money they lend, though many break this last rule. Some of them wear their beards, wash each others feet, &c. and all use plainness of speech and dress. Some have been expelled their society for wearing buckles in their shoes, and having pocket holes in their coats. Their church government is democratical. They call themselves the Harmless Christians, Revengeless Christians, and Weaponless Christians. They are Baptists rather in name than in fact; for they do not use immersion. Their common mode of baptism is this: the person to be baptized kneels; the minister holds his hands over him, into which the deacon pours water, which runs through upon the head of the person kneeling. After this, follow imposition of hands and prayer.

"The denomination styled UNIVERSALISTS, though their schemes are very various, may properly enough be divided into two classes, viz. those who embrace the scheme of Dr. Chauncey, exhibited in his book entitled, 'The Salvation of all Men,' and the disciples of Mr. Winchester and Mr. John Murray.

"A judicious summary of Dr. Chauncey's sentiments has been given as follows:—"

"That the scheme of revelation has the happiness of all mankind lying at bottom, as its great and ultimate end; that it gradually tends to this end; and will not fail of its accomplishment, when fully completed. Some, in consequence of its operation, as conducted by the Son of God, will be disposed and enabled, in this present state, to make

* In H. Adams's "View of Religions," article *Universalists*, where the reader may find also a summary of the arguments for and against his scheme.

such improvements in virtue, the only rational preparative for happiness, as that they shall enter upon the enjoyment of it in the next state. Others who have proved incurable under the means which have been used with them in this state, instead of being happy in the next, will be awfully miserable; not to continue so finally, but that they may be convinced of their folly, and recovered to a virtuous frame of mind: and this will be the effect of the future torments upon many; the consequence whereof will be their salvation, they being thus fitted for it. And there may be yet other states, before the scheme of God may be perfected, and mankind universally cured of their moral disorders, and in this way qualified for, and finally instated in eternal happiness. But however many states some of the individuals of the human species may pass through, and of however long continuance they may be, the whole is intended to subserve the grand design of *universal happiness*, and will finally terminate in it; inasmuch, that the *Son of God* and *Saviour of men* will not deliver up his trust into the hands of the *Father* who committed it to him, till he has discharged his obligations in virtue of it; having finally fixed all men in heaven, when God will be *All in All*.*

"The number of this denomination is not known. The open advocates of this scheme are few, though the number is larger who embrace the doctrine of the salvation of all men, upon principles similar, but variously differing from those on which the above-mentioned scheme is grounded.

"The latter class of Universalists have a new scheme, differing essentially from that of the former, which they reject as inconsistent and absurd; and they cannot conceive how they who embrace it can, 'with any degree of propriety, be called Universalists, on apostolic principles, as it does not appear that they have any idea of being saved by, or in the Lord, with an everlasting, or with any salvation.' Hence they call them 'Pharasaical Universalists, who are *willing to justify themselves*.'*

"There are but a few of this denomination of Universalists in the United States. Of these few some are in Pennsylvania, some in different parts of New York, Connecticut, Rhode Island, and New Hampshire;

* See Mr. Murray's "Letter to a Friend," page 40, 41, printed in Boston, 1791. Dr. Morfe's account of the Universalists being tediously prolix, is omitted.

RELIGION.

but the body of them are in Boston and Gloucester, in Massachusetts. They have several constituted churches, which are governed by an ecclesiastical constitution, formed in 1789, by a small convention of their ministers at Philadelphia.

" There is a small and singular sect of christians, called SHAKERS, which has sprung up among us as lately as 1774, when a few of this sect came from England to New York, and there being joined by a few others, they fixed at Nisqueunia, above Albany, which is their principal settlement; a few others are scattered in different parts of the country.

" The head of this party, while she lived,* was Anna Lee, styled the Elect Lady. Her followers asserted, that she was the woman spoken of in the twelfth chapter of the Revelations, and that she spoke seventy-two tongues; and although these tongues were unintelligible to the living, she conversed with the dead, who understood her language. They alledged also that she was the mother of all the *Elect*; that she travailed for the whole world; that no blessing could descend to any person but only by and through her, and that in the way of her being possessed of their sins, by their confessing and repenting of them, one by one, according to her direction.

" Their leading doctrinal tenets, as given by one of their own denomination, are, " That the first resurrection is already come, and now is the time to judge themselves. That they have power to heal the sick, to raise the dead, and cast out devils. That they have a correspondence with angels, the spirits of the saints, and their departed friends. That they speak with divers kind of tongues in their public assemblies. That it is lawful to practise *vocal music*, with *dancing*, in the christian churches, if it be practised in praising the Lord. That their church is come, out of the order of natural generation, to be as Christ was; and that those who have wives, as though they had none. That by these means heaven begins upon earth, and they thereby lose their earthly and sensual relation to Adam the first, and come to be transparent in their ideas, in the bright and heavenly visions of God. That some of their people are of the number of the 144,000 who were redeemed from the earth, and

* Notwithstanding her predictions and assertions to the contrary, she died in 1784, and was succeeded by one James Whitaker, who also died in 1787. Joseph Meacham, who has attained the reputation of a prophet among them, is at present their leader.

were

were not defiled with women. That the word everlasting, when applied to the punishment of the wicked, means only a limited period, except in the case of those who fall from *their* church; and that for such there is no forgiveness, neither in this world nor that which is to come. That it is unlawful to swear, game, or use compliments; and that water baptism and the Lord's supper are abolished. That Adam's sin is not imputed to his posterity; and that the doctrines of election and reprobation are to be rejected.

"The discipline of this denomination is founded on the 'supposed perfection of their leaders. The Mother, or the Elect Lady, it is said, obeys God through Christ. *European* elders obey her. *American* labourers and common people obey them; while confession is made of every secret thing, from the oldest to the youngest. The people are made to believe that they are seen through and through, in the gospel glass of perfection, by their teachers, who behold the state of the dead, and innumerable worlds of spirits, good and bad.

"These people are generally instructed to be very industrious, and to bring in, according to their ability, to keep up the meeting. They vary in their exercises. Their heavy dancing, as it is called, is performed by a perpetual springing from the house floor, about four inches up and down, both in the men's and women's apartment, moving about with extraordinary transport; singing, sometimes one at a time, sometimes more, making a perfect charm.

"This elevation affects the nerves, so that they have intervals of shuddering, as if they were in a strong fit of the ague. They sometimes clap hands, and leap so as to strike the joists above their heads. They throw off their outside garments in these exercises, and spend their strength very cheerfully this way. Their chief speaker often calls for attention, when they all stop and hear the harangue, and then fall to dancing again. They assert that their dancing is the token of the great joy and happiness of the new *Jerusalem State*, and denotes the victory over sin. One of the postures, which increases among them, is turning round very swift for an hour or two. This, they say, is to show the great power of God.

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" They sometimes fall on their knees, and make a sound like the roaring of many waters, in groans and cries to God, as they say, for the wicked world who persecute them.*

" The Jews are not numerous in the United States. They have synagogues at Savannah, Charleston (South Carolina), Philadelphia, New York, and Newport. Besides those who reside at these places, there are others scattered in different towns in the United States.

" The Jews in Charleston, among other peculiarities in burying their dead, have these: After the funeral dirge is sung, and just before the corpse is deposited in the grave, the coffin is opened, and a small bag of earth, taken from the grave, is carefully put under the head of the deceased; then some powder, said to be earth brought from Jerusalem, and carefully kept for this purpose, is taken and put upon the eyes of the corpse, in token of their remembrance of the Holy Land, and of their expectations of returning thither in God's appointed time. Whether this custom is universal among the Jews, is not known.

" They generally expect a glorious return to the Holy Land, when they shall be exalted above all the nations of the earth. And they flatter themselves that the period of their return will speedily arrive, though they do not venture to fix the precise time.

" The whole number of persons who profess the Jewish religion, in all parts of the world, is supposed to be about three millions, who, as their phrase is, are witnesses of the unity of *God* in all the nations of the world.

" Besides the religious sects enumerated, there are a few of the German inhabitants in Pennsylvania who are styled SWINSEILDIAHS; and, in Maryland, a small number called NICOLITES, or NEW QUAKERS, but with the distinguishing sentiments of these sects I am not acquainted."

Government.

The government of the United States of America is universally regarded as the most replete with practical freedom of any that have existed. The ancient classical republics originated in small cities, and the application of their forms to territories of great extent and population will ever be found of dubious expediency. There are even ideas radi-

* H. Adams's " View of Religions," Article, *Shakers*.

cally false in our estimation of those boasted republics, which were often severe aristocracies. In all, the practice of slavery was general; not over negroes, whose natural inferiority is recognised by anatomy, as well as by induction, but over their brethren, men of the same colour and constitution with their masters. In all the ancient republics, while the citizen defended his own freedom, he exercised a severe tyranny over his slaves. Such were those ancient republics, of which a partial and remote view, like that of a distant city, in which the towers, palaces, and temples alone appear, has introduced many commotions among modern nations.

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MENT.

While the evils which this generation has witnessed in Europe have arisen from the too violent exertions of theory, leading to rapid transitions from one extreme to another, instead of gradual preparation, the liberty of the United States has slowly grown up to a flourishing maturity. The French tree of liberty was suddenly transplanted, and as suddenly perished, being generally, in truth and in symbol, a feeble poplar, while the American oak rose gently from the seed, struck its roots in proportion as it reared its head, and its gathered vigour promises a long duration. From the very commencement, the English settlers were accustomed to live without any strong or splendid government, and were prepared for complete freedom, by a long previous education. We have seen that a congress of four states of New England was formed as early as 1643, and lasted until 1686; and the republican system had been long known in its essential forms, before the denomination was imposed. The form may be praised by a candid European, without any wish of imitation, as depending on circumstances not to be found in Europe; particularly the absence of any powerful enemy, who might force the assumption of the dictatorial, or even monarchical system, in order to enforce general obedience for general preservation. Nor can we forget that they are our brethren, and that at a crisis like the present, universal concord should be promoted among all the nations that use the English language, as a defence against the attempts of intoxicated ambition.

When the United States asserted their independence in 1776, they published articles of confederation and perpetual union for their com-

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mon defence and the security of their liberties. The thirteen states bound themselves to assist each other against all attacks or injuries on account of religion, sovereignty, commerce, or any other pretence. Each state was to appoint delegates to meet in congress the first Monday in November of every year, with a power reserved to each state to recall its delegates, or any of them, at any time within the year, and to replace them by others. No state was to be represented in congress by less than two, or more than seven members; and no person could be a delegate for more than three years, in any term of six years; nor could a delegate hold any office of emolument. Each state was to have one vote, and all were bound to abide by the determination of the majority.

These articles of confederation were however soon found inadequate to the purposes of a stable and lasting constitution, which required a more firm executive power, and a more deliberative division of the representation.

The government of the United States is vested, by the constitution of 1789, in a president and two councils. The president is chosen for the term of four years. The senate or superior council consists of two senators from each state, chosen every six years. The house of representatives is elected every second year, and is not to contain more than two hundred members, each representing, according to the progress of the population, from 33,000 to 50,000 inhabitants. The legislative power is vested in the two councils; while the executive is lodged with the president; and a vice president is also chosen to supply his place on any emergency. The president commands the army and navy, and may pardon offences, except in case of impeachment; he makes treaties, with the consent of two thirds of the senators, who are also to advise in the appointment of ambassadors. Particular regulations are formed to prevent any distinct state from assuming offices which belong to the community, such as forming treaties, issuing letters of marque, and the like acts of independent sovereignty, which might endanger the union of the whole. The judicial power is lodged in one supreme court, and in such inferior courts as the congress may ordain, the judges holding their offices during their good behaviour. Each province has
also

also its peculiar government, consisting commonly of a senate and house of representatives, annually chosen. GOVERNMENT.

As no work of man is perfect, and political parties naturally arise in a land of freedom, it is no wonder that various sects of politicians appear, and that disputes, as usual, draw off the opponents to extreme views of each question, further sharpened by the wildness of French democracy. As it is the maxim of France to weaken every thing that wears the English name, and to excite the three British kingdoms against each other, so in America it was attempted to excite divisions between the northern and the southern states: a vain attempt, soon overcome by the solidity and reflection of the national character. At present the chief parties are the Federalists and Anti-federalists. The former, who introduced the present government, have been accused of wishing to establish a monarchy and a hereditary aristocracy; while the latter have been suspected of leaning too much towards a wild and theoretic democracy. These animosities begin to subside, as the people find, by experience, the cheap and practical advantages of their present constitution, especially under a president of great knowledge and benevolence.* The chief real division of sentiments seems to be between the commercial men and the farmers; the former being bound to England by the ties of interest, while the latter breathe a spirit of complete independence.

Dr. Barton, who has published some additions and notes to the account of America given in this geography †, has introduced some account of the laws, which shall here be transcribed.

“ The law of the United States is of a complex character; relating, *first*, to objects of state jurisdiction; and *secondly*, to objects of federal jurisdiction. Laws.

“ 1. The objects of state jurisdiction comprehend every case, which is not exclusively of federal jurisdiction, or not expressly prohibited by

* The federalists introduced the present government, while the anti-federalists do not, like the French, wish to abolish the detached government of each state, but are merely so termed as oppositionists, and thence more democratic than the former. Imray, 193.

† Pinkerton's Geography, Philadelphia, 1804, 8vo. vol. ii. p. 427. There are two other American editions which the author has not seen, nor has he heard that they contain any additional information.

LAWS.

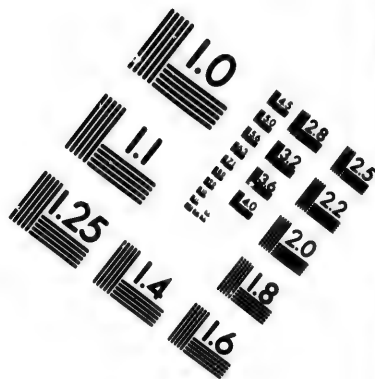
the federal constitution. The law affecting these objects is either written or unwritten. The *written* law of every state is composed, 1st, of the constitution of the United States, acts of congress, and treaties; and, 2d, of the constitution of the state, and the acts of the state legislature. The *unwritten* law of every state is composed, 1st, of so much of the common law of England, in criminal and civil cases, as was applicable to the circumstances of the state when it was first settled; and, 2d, of the customs and usages of the people, sanctioned by time, or recognised by the courts of law. The statute law of England, prior to the American revolution, has force in the respective states only under particular circumstances: 1st, Where the statute was enacted previously to the settlement of the colony, and was suitable to the colonial situation and pursuits of the settlers. 2d, Where the provisions of the statute were extended, by its own words, to the colonies. 3d, Where the colonial legislature has adopted in general terms, or re-enacted in detail, the English statute. 4th, Where the courts of law have recognised and enforced a convenient practice, originating in the presumption that a statute had been extended, and was in operation in the colony. The evidence of the law, prior to the American revolution, was the same as in England; but subsequent to that epoch, the reports and elementary works of English jurists are cited in the American courts; not by way of authority, but by way of analogy and illustration. It will readily occur to the reader, that on the same principle which recognises the law of nations, the law of merchants, the civil law, and the canon law, as a part of the common law of England, those codes are also recognised, in the system of American jurisprudence, as affording the rules of decision upon the subjects to which they respectively apply.

“ The law of the several states is administered, as in England, through the medium of judicial and ministerial officers, acting collectively as courts, or individually as magistrates. The judicial officers are judges, justices of the peace, registers of wills, or other similar officers exercising a jurisdiction of an ecclesiastical nature, for the probate of wills, and issuing letters of administration. The ministerial officers are sheriffs, coroners, &c. &c. In each state, generally speaking, there are a court of errors and appeals, a supreme court, county courts of common pleas, and

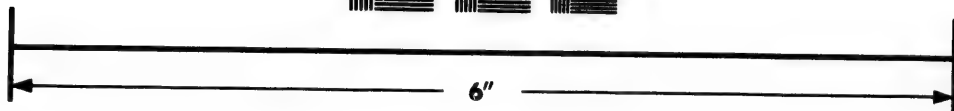
and quarter sessions, an orphan's court, and a register's court. In each state, generally speaking, the justices of the peace have individually a limited cognizance of civil suits, besides the authority common to all judicial officers in criminal matters.

" 2. The objects of federal jurisdiction are confined to the cases expressly delegated or contemplated by the constitution of the United States; and all these objects, both as to civil and criminal matters, are of a national character. It follows, from this view of the subject, that the law of the United States consists entirely of *written law*; to wit, of the constitution of the United States, the acts of congress and treaties. It is true, that in criminal, as well as in civil cases, congress, in order to effectuate the powers expressly delegated to the federal government, may adopt the unwritten law of any individual state of the union of England, of France, or of any other nation; but still it is only by force of the written law of the United States that the adoption can be accomplished. In the specified *civil cases*, the constitution gives to the federal courts sometimes original, and sometimes appellate jurisdiction; sometimes concurrent with the state courts, and sometimes exclusive: and by an act of congress, made to effectuate the judicial powers of the union, it is expressly provided, that 'the laws of the several states shall be regarded as rules of decision, in trials at common law, in the courts of the United States.' As the laws of the several states consist of the unwritten law, as well as of the written law, this provision gives, of course, a common law jurisdiction, in civil cases, to the federal courts. But in *criminal cases*, no such general provision exists. The penal code of the United States rests, therefore, upon the constitution, and the several acts of congress, for defining and punishing crimes and offences: and if the jurisdiction of the federal courts, in criminal matters, is confined to the penal code of the United States, it has been anxiously asked, How it can embrace crimes and offences at common law? The question has generated a diversity of opinion; and even the judges of the supreme court of the United States have pronounced contrary decisions upon it. The federal courts having jurisdiction of the subject, are governed, according to its nature, by the laws of the United States, or of the indi-





Resolution test chart featuring patterns of vertical and horizontal lines. Numerical values include: 1.0, 1.1, 1.25, 1.4, 1.6, 1.8, 2.0, 2.2, 2.5, 2.8, 3.2, 3.6, 4.0, 4.5, 5.0, 5.6, 6.3, 7.1, 8.0, 9.0, 10.0, 11.2, 12.5, 14.0, 16.0, 18.0, 20.0, 22.5, 25.0.



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LAWS.

vidual states, by the law of nations, the law of merchants, and by the civil and canon law.

"The law of the United States is administered, through the medium of federal courts and officers, similar to those of the individual states, admitting, in some instances, the auxiliary aid of the state courts and magistrates. The supreme court of the United States consists of a chief justice, and five associate judges, and sits at the seat of the national government. The United States are divided into five circuits, each circuit composed of a specified number of districts, or states; and a circuit court, held by a judge of the supreme court, and the district judge of the proper state, sits twice a year in each district. Each state is erected into a federal district, in which a court is held four times a year by the district judge. Besides an attorney-general for the union, the United States appoint an attorney and a marshall (who has all the powers of a sheriff) for each district."

The laws seem in general to correspond with those of England, handed down by their ancestors. It was to have been expected that a new and short code should have appeared; but as the lawyers are a powerful body, and often chosen senators and representatives, it can scarcely be supposed that they should consent to abridge their profits by a simplification of the laws. Different states have also particular ordinances and customs, which are permitted when they do not disturb the general concord. But a code of laws, to be held in universal observance, might afford a fair object of ambition. In Europe the code is the most brief in the most despotic states, where the patient dies of an apoplexy; while in the more free states he perishes by a slow consumption.

Population.

The population of these extensive territories was formerly estimated, by order of congress, in 1790, and found to be 3,930,000, exclusive of the inhabitants N. W. of the Ohio, supposed to be 20,000. It is inferred that the population is doubled every twenty years, in which case the population may now amount to about six millions.* The number

* Connecticut, the most populous province, is supposed to contain sixty-five for each square mile.

of slaves in 1790 was 697,697, and has probably been little increased, as many emancipations have taken place, and the slave trade is dis-
countenanced.*

A small military force is maintained for the sake of supporting public order, and upwards of five thousand were raised for three years, for the defence of the frontiers. But a standing army is deemed incompatible with the republican government; and the strength of the state is computed from the militia, which is stated by Dr. Morfe at 700,000. Yet his mode of reasoning is vague and inconclusive; and it would seem more agreeable to the usual rules to estimate the utmost effective force at 150,000, a number sufficiently formidable to subdue the whole continent, and to set foreign invasion at defiance. But it must not be forgotten, that in practice it becomes difficult to raise even a small army, as the manufacturers and labourers are well paid, and little inclined to exchange their easy situation for the hardships of a military life.

The navy of the United States is still of little consequence, though a few ships were equipped during the recent short dispute with France. In the course of a century or two, it is probable that the maritime spirit of their progenitors will be displayed, and that the American fleet will rival any in Europe. †

The revenue of these flourishing provinces seems to be entirely derived from the duties on imports and tonnage, the present spirited president having annihilated all taxation, and he has even declared, in a celebrated speech, that henceforth no tax gatherer shall be seen at the door of any inhabitant of the United States. Dr. Morfe ‡ informs us that the revenue, in the year 1789, amounted to two millions, sixty-nine thousand, one hundred and seventy-five dollars, while the expence was seven

* Yet by the return of the population of the United States, printed at Washington 1802, 8vo, the total was five millions, one hundred and seventy-two thousand, three hundred and twelve, the slaves being included, whose number was eight hundred and seventy-five thousand six hundred and twenty-six.

† From Mr. Gallatin's Report and Estimates for the service of the year 1804, p. 71, it appears that there are twelve frigates from thirty six to forty-four guns. Some of these frigates have recently distinguished themselves before Tripoli. The seamen of the United States are computed at 63,000.

‡ Edition 1794, 4to. p. 216.

REVENUE. hundred and forty thousand, two hundred and thirty-two dollars. From the same authority it appeared, that in 1792 the domestic debt of the United States amounted to more than thirty-one millions of dollars, and the foreign debt to about twelve millions of dollars. The common interest of the American funds is six per cent.*

The revenue and expences have in course increased with the growing prosperity of the states. In 1787 and the following year the new republic suffered great inconvenience from the want of capital stock, but after the funding system was established, until the year 1795, the country enjoyed an unexampled prosperity. The taxable property of the United States, by an actual valuation on a recent law of congress, was, in 1801, before the acquisition of Louisiana, estimated at more than seven hundred and fifty millions of dollars. The personal property was supposed to equal that sum, and about five hundred millions of acres of land, at two-dollars the acre, form a thousand millions. The complete national property would thus amount to two thousand five hundred millions of dollars.†

The same author, computing the length of the United States at one thousand two hundred and fifty miles, and the breadth at one thousand and forty, estimates the contents at more than one million square miles, or six hundred and forty millions of acres. The currency in cash he supposes seventeen millions of dollars; the paper two hundred millions; and he adds, that the funded debt in 1799 amounted to eighty-eight millions, four hundred and fifty-six thousand, and thirty-eight dollars,

* From the edition of Dr. Morse's book, printed at Boston 1796, two volumes 8vo. it appears that the revenue of the United States in 1791 was 3,329,750 dollars. He also gives in vol. 1. p. 261, &c. the following state of the revenue in 1795:

Permanent	-	-	-	-	-	4,692,673
Temporary	-	-	-	-	-	1,859,626

					Total	6,552,300
Expenditure	-	-	-	-	-	5,481,843

1,070,456

He computes the national debt at that time to have been about sixty-four millions of dollars.

† Thoughts on the increasing wealth of the United States. Washington, 1801, 8vo. p. v.

while

while the sinking fund was nine millions, fifty-two thousand, two hundred and thirty-two dollars.*

From the latest information that can be procured, the revenue of the United States in 1805 amounted to about twelve millions and a half of dollars.† The expences of government, and interest of the national debt, require about seven millions and four hundred thousand dollars; the remaining sum passes towards the extinction of the national debt. When this interest is paid a part of the debt is also extinguished, but the policy of this measure may be doubted, as a moderate national debt is no doubt useful to a state, both in its public capacity, and in the private fortunes and transactions of individuals: at any rate it might be left optional. It is said that the war with the savages, which terminated in 1795, is said to have cost the states one million of dollars yearly, and was certainly conducted with little spirit or decision, while in sound policy, and at a less expence, it might have been terminated at one effort.

The political importance of the United States will depend, in a great measure, upon the individual character, as the government is not sufficiently strong to use coercion even for the general prosperity. The

* Mr. Gallatin, in his Sketch of the Finances of the United States, New York, 1796, 8vo. gives the following estimates:—

P. 48. Recapitulation of revenues.

Duties on import and tonnage,	- - - - -	5,810,000
Internal duties,	- - - - -	410,000
Postage of letters,	- - - - -	30,000
Dividend on Bank Stock,	- - - - -	160,000

6,410,000 dollars.

P. 86. Permanent expences, - - - - - 6,312,763 dollars.

In p. 96, he calculates the national debt in 1790 at 52,813,673 dollars; and in 1796 at more than 80,000,000. During the presidency of Mr. Jefferson, about fifteen millions of the national debt have been discharged.

† According to the report of Mr. Gallatin, secretary of the treasury, Washington, 1803, folio, the revenue of 1802, arising from the duties, exceeded 10,100,000 dollars, and that from the sale of public lands 400,000.

The annual expences were then 9,800,000 dollars, of which 7,300,000 went to the payment of principal and interest of the public debt, and 2,500,000 to the expences of government, &c. About 10,000,000 of the public debt had then been discharged. The price of land was about two dollars per acre.

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most impartial travellers have been impressed with regret and astonishment at the spirit of selfishness and avarice, which too universally prevails, and which crushes or impedes every great or noble exertion. If the spirit of a monarchy, according to Montesquieu, be glory, the spirit of a commonwealth, by the same authority, is virtue. Yet the latter word having become of dubious acceptation, if not entirely obsolete, it might perhaps be argued, from the example of Holland, Switzerland, and the French Directory, not to mention many republics of antiquity, that the spirit of a commonwealth is money; and the exchange is certainly not for the better, as the love of glory, that last infirmity of noble minds, is a principle of the most large and expansive nature; sometimes, as in war, destructive; but at others the source of every memorable exertion of human genius and industry. By the love of money the character becomes degraded, the generous feelings obliterated, the very mind paralysed; while the love of glory, like the vast mechanical force of steam, another vapour, often occasions exertions that seem to surpass human power. Such reflections have unavoidably arisen to travellers otherwise impressed with the deepest veneration for the new commonwealth. It is however to be hoped and expected that this character will not, like that of the Jews, become indelible; but that, after the fathers have laid up a sufficient stock of wealth, their posterity will divert their attention to more sublime pursuits. The war with the Indians, which ought to have impressed all America with a deep sense of the power of the states, and which a monarch of common spirit would have terminated in one conflict, appears to have been palsied by individual avarice, and a complete negligence of national reputation. The equipment of a few frigates against France was also a mighty effort; and the sum allotted for six frigates scarcely supplied three. The most candid observer, and even the warmest admirer of the new republic, must allow with regret that its political importance can only be weighed by posterity. It is to be hoped that the climate and soil of America have not that malignant influence over the human mind which have been ascribed to them by some philosophers, and of which they adduce an example in Spanish America, which after the first and second generation has not, in three long centuries, produced one man eminent in
any

any department of peace or war, science or art; but that, on the contrary, the new republic may be distinguished by names which shall rival any of the ancient continent. Nor has a country which has already produced a Franklin, a Washington, reason to apprehend any rapid declension of talents or celebrity.*

POLITICAL
IMPORT-
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* "Un solo Franklin compensa superabundantemente todos los millones, que se quiera suponer existían en la América." Such is the expression of a Spaniard, Estalla, in speaking of the destruction of the savages. *Viagero Universal*, xii. 17. Madrid, 1795, 8vo.

Another Spanish author observes, that the immortal Washington calculated the probable number of the inhabitants of the United States in 1807 at 7,178,381; in 1827, 14,356,762; and at the middle of this century more than 33,000,000, if providence prolong their prosperity. "*Este es el voto de todos los cosmopolitas, quienes se complacen en el retrato lisongero que ofrece este país virtuoso y feliz, mientras otros muchos del globo no presencian mas que escenas de ruina y de miseria.*" Antillon, Carta de la Am. Sept. Madrid, 1803, 4to. p. 29.

And again:

"Así la América libre prospera y se enriquece, á expensas de la desgraciada Europa: y mientras las naciones de esta parte del globo se aniquilan rápidamente, en guerras sangrientas y proyectos ambiciosos, al otro lado del Atlántico se engrandece y consolida aquel imperio sobre las bases inalterables de la justicia y de la paz." Ib. p. 31.

CHAPTER III.

CIVIL GEOGRAPHY.

*Manners and Customs.—Language.—Literature.—Universities.—Cities.—Edifices.
—Roads.—Inland Navigation.—Manufactures and Commerce.*

MANNERS
AND
CUSTOMS.

THE manners and customs of the inhabitants of the United States may be conceived to differ little from those of their British ancestors, except in a few local particularities, to be learned from the common books of travels, which sometimes explain even the little defects visible in particular states. Travellers have observed, even in Philadelphia, a want of urbanity, and a spirit of coldness and reserve, which renders society melancholy. In general the common people shew their independent spirit by furliness of behaviour, and a contempt of that intercourse of trifling civilities, which render life amiable. Cased in self importance, they seem to think that a republican is only another name for an armadillo. Various religious doctrines, some of them of very recent invention, seem to conspire with the love of money, or, in other words, constant care, to throw an additional gloom over the character. One religious sect indeed has adopted dancing as a mode of worship; but a Frenchman would think it the dance of St. Vitus, and would pronounce their mirth to be the height of melancholy. The gay festivals of the ancient republicans, and the cheerful and happy manners of the Swiss, seem equally unknown; and the chief business seems to be to render life as miserable as possible. Musical concerts are more frequented than the theatre; and in general there is little taste for those amusements which are connected with the arts and sciences. In some provinces gaming is said to be too prevalent: but the deepest game consists in selling unsettled lands at advanced prices: a

species of stock-jobbing which, like a Mississippi scheme, stimulates the avarice of many.*

MANNERS
AND
CUSTOMS.

Mr. Belknap's account of the manners of the earlier settlers will be found singular and amusing.

"The professed design of the plantation being the advancement of religion, and men of the strictest morals being appointed to the chief places of government, their zeal for purity of every kind carried them into some refinements in their laws which are not generally supposed to come within the sphere of magistracy, and in larger communities could scarcely be attended to in a judicial way. The drinking of healths, and the use of tobacco, were forbidden; the former being considered as an heathenish and idolatrous practice, grounded on the ancient libations, the other as a species of intoxication and waste of time. Laws were instituted to regulate the intercourse between the sexes, and the advances toward matrimony: they had a ceremony of betrothing, which preceded that of marriage. Pride and levity of behaviour came under the cognizance of the magistrate. Not only the richness, but the mode of dress, and cut of the hair, were subject to state regulations. Women were forbidden to expose their arms or bosoms to view; it was ordered that their sleeves should reach down to their wrist, and their gowns be closed round the neck. Men were obliged to cut short their hair, that they might not resemble women. No person not worth two hundred pounds was allowed to wear gold or silver lace, or silk hoods and scarfs. Offences against these laws were presentable by the grand jury; and these who dressed above their rank were to be assessed accordingly. Sumptuary laws might be of use in the beginning of a new plantation; but those pious rulers had more in view than the political good. They were not only concerned for the external appearance of sobriety and good order, but thought themselves obliged, so far as they were able, to promote real religion, and enforce the observance of divine precepts."†

On the termination of the war with England the rancour of a few proposed the adoption of a new language; and a wit recommended the

Language.

* That cruel operation known in the southern states by the name of gouging, is a disgrace to human nature, and ought to be punished with death.

† Belknap's New Hampshire, i. 77.

LANGUAGE. Hebrew. The English has remained in constant use, and is generally spoken with considerable purity, though a few medical and political authors occasionally make use of peculiar phrases and idioms, so that some have supposed that the dialect might, in the course of ages, become as different as the Portuguese is from the Spanish. But as the best writers follow the classical models of England, it is probable that the variations will not even equal those of the dialects in the Greek language.

Literature. The books published in British America were chiefly of a religious kind; and those of Mather, printed in the end of the 17th century, at Boston, concerning some supposed witches in that city, are remembered on account of their fanatic cruelty. But before the emancipation Franklin had become a distinguished name in letters; and many authors of considerable merit have since arisen in the United States.* Literary academies publish their transactions; while magazines and newspapers contribute to the popular diffusion of useful knowledge. Education seems also to attract more and more attention, and to be conducted in numerous seminaries with the most laudable care. In the northern provinces, called New England, schools are established in almost every township. Even the Catholics have a college in Maryland.

Education. Yet some intelligent Americans complain that the study of the learned languages is rather on the decline, and that there is even a deficiency of teachers, so that the scholars in the higher classes are often occupied in superintending the younger proficients. This plan cannot be praised; and as nothing is more important in any country than the national education, it would be for the interest and honour of the people at large, that numerous and competent salaries should be assigned to the dispensers of public instruction. Pensions to literary men are also rare or unknown, though indispensably necessary, in order to invite and propagate the sciences in a new country. As, in the general opinion of mankind, "the chief glory of every people arises from its authors,"† a few thou-

* During his residence at Paris, the author was delighted to observe the scientific dispositions of many young Americans. One of them had even purchased a large cabinet of mineralogy, with the laudable intention of presenting it to an American university.

† Johnson's Pref. to Dict.

and lasting fame, than the millions wasted in destructive wars. As without lamps there cannot be light, so without oil the lamps must expire.

It is believed that Harward university, in Cambridge, province of Massachusetts, founded in 1638, is the most ancient as well as the chief literary establishment in North America.

Yale college, in Connecticut, was founded in 1700, but the buildings only began to be erected at New Haven in 1717. It was rebuilt in 1750, and contains about one hundred and thirty students.

The college of William and Mary, in Virginia, is nearly of the same date, and the few students are chiefly in the law.

In New York a college was founded by an act of the British parliament in 1754, which is now called Columbia College, and is said to be frequented by more than one hundred students.* The college in Prince Town, in New Jersey, called Nassau Hall, was founded about the year 1738, and enlarged in 1747. The income is about 900*l.* a year, of which 200*l.* arise from land and public securities, while the remainder is paid by the students. This college is a large and handsome building, in a pleasant and healthy situation.

Dartmouth College, in New Hampshire, was founded in 1769, for the instruction of the savages, but has since become an ample endowment for the youth of the northern provinces.

In Pennsylvania there are many literary societies, particularly the American Philosophical Society, formed in 1769, and which has published, in 1771 and 1786, two volumes of their transactions.† The university of Pennsylvania was founded at Philadelphia during the war; and being since united with the college, has become a respectable seat of learning. In this province there are also Dickenson college and Franklin college.

* In Columbia college, Albany, there were in March 1803, one hundred and twenty students, besides fifty-four students of medicine. The eight academies of New York were frequented by upwards of four hundred students.

† The Medical and Physical Journal of Philadelphia is published by Dr. Barton. Of the Medical Repository of New York there are eight vols. published by Drs. Mitchell and Miller.

UNIVERSITIES.

In 1782 the foundation called Washington college arose at Chester Town, in Maryland. The university of Georgia is at Louisville, a recent foundation, possessing funds to the amount of fifty thousand acres of land.* Some other states may boast of colleges, or rather considerable academies; and these detached institutions, especially in so extensive a territory, are better calculated for the advancement of learning than one or two great universities.

Even in Tennessee there is a society "for promoting useful knowledge," which is far more laudable than those established in some countries for promoting useless knowledge; and there is also an academy, with many grammar schools.†

Jefferson college, so named after the respectable and intelligent president, is a new foundation in the Mississippi territory.

Nor are the fine arts neglected; for in the winter 1803, an academy of arts was founded at New York. This design is said to have originated with Mr. Livingston, formerly Ambassador at Paris, and his brother was the first president. There are eight directors elected by the subscribers, of whom there are about one hundred, each paying annually fifty dollars. The building, which contains the collection of statues and paintings, was formerly a circus, and already presents a valuable series of casts, of the most admired ancient figures. A present of prints and drawings has been made by Bonaparte. A young artist, who displays considerable talents, Mr. Vanderlyn, who is a native of Esopus, or Kingston, on the river Hudson, has received a pension from the American government; and in the summer 1805 he went to Italy, in order to procure casts of the most admired statues and busts.‡

CITIES.

With regard to size and consequence the cities of the United States must be thus arranged:—Philadelphia, New York, Boston, Baltimore, Charlestown; but in relation to commerce New York precedes Phila-

* Mr. Sibbald, in his Notes on the Pine Lands of Georgia, printed at Augusta, 1801, 8vo. informs us, page 63, that the university of Georgia was founded in June 1801, near the Cedar shoals, on the river Oconee. Dr. Morse says, that the charter was granted in 1785, but perhaps the building was not completed until 1801.

† Mr. Tench Coxe says, page 162, that there are probably between a hundred and fifty thousand and a hundred and eighty thousand people of the United States who read and speak the German language, and are supplied with books from Holland, the Hanse towns, or America itself.

‡ Another academy is since established at Philadelphia.

delphia,

delphia, and Charlestown ranks above Baltimore. Before proceeding to a brief account of these cities, it will be proper to describe that of Washington, the intended metropolis of the United States.

"The city of Washington, in the territory of Columbia, was ceded by the states of Virginia and Maryland to the United States, and by them established as the seat of their government, after the year 1800. This city, which is now building, stands at the junction of the rivers Patomak and the Eastern branches, latitude $38^{\circ} 53'$ North, extending nearly four miles up each, and including a tract of territory exceeded, in point of convenience, salubrity, and beauty, by none in America; for although the land in general appears level, yet by gentle and gradual swellings a variety of elegant prospects is produced, and a sufficient descent formed for conveying off the water occasioned by rain. Within the limits of the city are a great number of excellent springs; and by digging wells, water of the best quality may readily be had. Besides, the never-failing streams that now run through that territory may also be collected for the use of the city. The waters of Reedy branch, and of Tiber creek, may be conveyed to the President's house. The source of Tiber creek is elevated about 236 feet above the level of the tide. The perpendicular height of the ground on which the Capitol is to stand is 78 feet above the level of the tide in Tiber creek: the water of Tiber creek may therefore be conveyed to the Capitol, and after watering that part of the city, may be destined to other useful purposes.

"The Eastern branch is one of the safest and most commodious harbours in America, being sufficiently deep for the largest ships for about four miles above its mouth, while the channel lies close along the bank adjoining the city, and affords a large and convenient harbour. The Patomak, although only navigable for small craft, for a considerable distance from its banks next to the city, (excepting about half a mile above the junction of the rivers) will nevertheless afford a capacious summer harbour; as an immense number of ships may ride in the great channel opposite to, and below, the city.

"The situation of this metropolis is upon the great post road, equidistant from the northern and southern extremities of the Union, and nearly so from the Atlantic and Pittsburg, upon the best navigation, and

CITIES.

and in the midst of a commercial territory, probably the richest, and commanding the most extensive internal resources of any in America. It has therefore many advantages to recommend it, as an eligible place for the permanent seat of the general government; and as it is likely to be speedily built, and otherwise improved by the public-spirited enterprise of the people of the United States, and even by foreigners, it may be expected to grow up with a degree of rapidity hitherto unparalleled in the annals of cities.

“ The plan of this city appears to contain some important improvements upon that of the best planned cities in the world, combining in a remarkable degree convenience, regularity, elegance of prospect, and a free circulation of air. The positions for the different public edifices, and for the several squares, and areas of different shapes, as they are laid down, were first determined on the most advantageous ground, commanding the most extensive prospects, and from their situation susceptible of such improvements as either use or ornament may hereafter require. The Capitol will be situated on a most beautiful eminence, commanding a complete view of every part of the city, and of a considerable part of the country around. The President's house will stand on a rising ground, possessing a delightful water prospect, together with a commanding view of the Capitol, and of the most material parts of the city. Lines or avenues of direct communication have been devised, to connect the most distant and important objects. These transverse avenues, or diagonal streets, are laid out on the most advantageous ground for prospect and convenience; and are calculated not only to produce a variety of charming prospects, but greatly to facilitate the communication throughout the city. North and south lines, intersected by others running due east and west, make the distribution of the city into streets, squares, &c. and those lines have been so combined as to meet at certain given points with the divergent avenues, so as to form on the spaces *first determined* the different squares or areas. The grand avenues, and such streets as lead immediately to public places, are from 130 to 160 feet wide, and may be conveniently divided into footways, a walk planted with trees on each side, and a paved way for carriages. The other streets are from 90 to 110 feet wide.

“ In

"In order to execute this plan, Mr. Ellicott drew a meridional line, CITIES.
by celestial observation, which passes through the area intended for the Capitol. This line he crossed by another, running due east and west, which passes through the same area. These lines were accurately measured, and made the bases on which the whole plan was executed. He ran all the lines by a transit instrument, and determined the acute angles by actual measurement, leaving nothing to the uncertainty of the compass."

Mr. Weld observes a great defect in the plan, the want of a grand and extensive quay, the shores being crowded with small wooden wharfs and warehouses; but these are only temporary, and no lasting edifice is to be permitted, except in brick or stone. In the Capitol the national councils are to assemble; and so grand is the plan, that the expence is estimated at a million of dollars, or 225,000 pounds sterling. The banks of the Patomak present inexhaustible quarries of excellent free-stone, harder than that of Portland; and at no great distance are found slate, paving stone, and lime stone, and, it is said, excellent coal.

The city of Philadelphia is supposed to contain about 50,000 inhabitants, and was designed by William Penn, the first proprietor and founder of the colony called Pennsylvania, in 1683. Philadelphia. The form is an oblong square, extending about two miles east and west, between the rivers Delawar and Schuylkill, or rather on the western bank of the former river. This city is neatly constructed, the chief streets being 100 feet in breadth, paved with pebbles, and the foot paths with brick. They are chiefly in a strait line, a form not approved by lovers of the picturesque; but in a city the chief objects are convenience, and a short access from one part to another. The charter of incorporation, granted by Penn in 1701, was singularly aristocratic, being copied from that of Bristol in England; but the general assembly of the province, in 1789, formed a liberal plan; and the government of the city, the prisons,* &c.
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* Morfe, 468.

* The prison of Philadelphia is celebrated for its excellent regulations. The chief front in Walnut-street is not less than one hundred and ninety feet in length. In 1794 the punishment of death was abolished in Pennsylvania, except for premeditated murder, and since that period offences have diminished nearly one half. Turnbull's Account of Philadelphia Prison, Phil. 1796, 8vo.

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may now be regarded as surpassing any in the world. There are many humane institutions, and a large public library. Amidst this deserved praise, it is truly surprising that one street called ~~Water-street~~ should remain a source of filth and contagion, especially as it was in this street that the noted yellow fever first appeared in 1793. The amiable and tolerant character of the Quakers differed widely from that of the fanatic settlers in New England: at present they do not exceed one fourth part of the inhabitants; and their aversion to the elegancies and luxuries of life is overcome by the wishes of the majority. Gay equipages are not rare in the streets of Philadelphia, and the theatre begins to be frequented. The expence of labour and domestic economy was, about five or six years ago, considered as higher in Philadelphia, and indeed in most parts of the United States, than in England; but at present it is probably far lower. The general use of salted provision must be injurious to the health; and it is inconceivable why this custom should have continued so long.

New York.

New York, the capital of the province of the same name, is situated on a promontory at the mouth of Hudson river, a noble and picturesque stream. The number of inhabitants in 1790 was 33,131, this city being about two miles in length and four in circumference. It was greatly injured during the war, but has since been enlarged and improved. The chief edifice is the Federal Hall, a neat building of Grecian architecture, in which Washington was installed president of the United States. In commerce, New York is considered as the chief city in North America, the harbour admitting ships of any burden. It is also the gayest city, and is thought to exceed Charlestown in South Carolina, which last is however a rival in hospitality and social pleasures. In public institutions for the promotion of education, the arts, sciences, &c. it however appears, by Dr. Morfe's account, to be deficient.

Boston.

Boston, the capital of the province of Massachusetts, and of all these northern provinces called New England, was regarded by Mr. Burke as

p. 14. and 107. Theories are idle; but cannot we learn from the experience of other countries? A frequency of executions only hardens the populace, as much as their indecent speed. They ought to be accompanied with great solemnity and long prayers, as at Vienna.

the chief city in North America; and he says that, from Christmas ^{CITIES.} 1747 to Christmas 1748, five hundred vessels cleared from this port only, for foreign trade, and 430 were entered inwards; not to mention coasting and fishing vessels, supposed to equal the others in number.¹ He considers the people of New England as the Dutch of America, being carriers for all the colonies of North America and the West Indies. The trade of Boston has however since declined, though still far from inconsiderable. This city is supposed to contain about 20,000 inhabitants. The harbour, on a large bay, is excellent, and capacious enough to receive five hundred ships at anchor; with a narrow entrance, commanded by a castle. There is a pier about 500 yards in length and 80 feet wide; and the harbour is interspersed with about forty islands, which afford excellent grain and pasturage. This city also suffered considerably by the war, but has been improved, and the public buildings are, in that part of the world, deemed elegant. Boston does not exceed two miles in length, being of a circular form; and on the west is the mall, or public walk, planted with rows of trees.* On the same side is Beacon hill, on which a monument has been erected, commemorating some of the most important events of the war. The fanatical spirit of this city seems gradually to subside; and Mr. Burke observes, after narrating the witchcraft delusion, 1692, in which so many innocent people perished by the bigotry of two clergymen called Encrease and Cotton Mather, "that the people there are now grown somewhat like the rest of mankind in their manners, and have much abated of their persecuting spirit." This city is even already ranked by some among the most pleasing and sociable in the United States.

Baltimore in Maryland stands on the north side of the river Pa- ^{Baltimore.} tapscow, which may rather be regarded as a creek of the great bay of Chesapeake, and has rapidly risen to its present consequence. The situa-

¹ Account of the European Settlements in America, 4th edit. 1765. vol. ii. p. 172.

* The new bridge erected in 1794 is a magnificent work, worthy of the present spirit and genius of this city. It is of wood, but thrown over an arm of the sea, being about one thousand eight hundred feet in length, and about thirty-four in breadth. Wansey's Journal, London, 1796, 8vo. (an amusing and instructive work), p. 41. This author observes, that Boston is the Bristol, New York the Liverpool, and Philadelphia the London of America.

CITIES. tion is rather low, but it has been rendered by art tolerably salubrious. In 1790 the number of inhabitants was 13,503.

Charlestown. Charlestown, in South Carolina, is situated at the confluence of Ashley and Cooper rivers, which are large and navigable, and open into a capacious estuary. The situation is esteemed remarkably healthy, though low, being refreshed by the sea breezes. In 1791 there were 16,359 inhabitants, of whom 7684 were slaves.* This city is celebrated for easy and social manners.

Such are the principal cities of the United States; but it may not be improper to add some account of a few others, interesting from their situation or other circumstances.

New Orleans. Since the acquisition of Louisiana, the city of New Orleans deserves great attention in every point of view.† Its situation is such as to command, in a great degree, the wide and important navigation of the river Mississippi, so essential to the prosperity of the inland settlements. In the year 1802, not less than two hundred and sixty-eight vessels entered the mouth of Mississippi, of which eighteen were armed; the American ships being one hundred and seventy, and the Spanish ninety-eight. The city of New Orleans was founded in the time of the Mississippi scheme, about 1720, under the regency of the Duke of Orleans. The plan is regularly disposed, the three principal and parallel streets being those of Orleans, Bourbon, and Chartres. Towards the river there is a noble quay. In the year 1788 so dreadful a conflagration happened, that of eleven hundred houses not two hundred remained.‡ It has since been completely rebuilt, and now contains about fourteen hundred houses and ten thousand inhabitants. In 1793 it was fortified, but the works are bad, and could offer but a feeble resistance. The ad-

* Michaux says that Charlestown contains 10,690 whites, and 9,050 slaves.

† Account of Louisiana, abstracted from documents in the offices of state. Philad. 1804, 8vo. p. 48.

‡ There was another terrible conflagration in 1795. *Memoires sur la Louisiane, Paris, 1805, 8vo. p. 3.* This author computes the exportation of the city of New Orleans from June 1800 to June 1801, at more than 60,000 barrels of flour, 1000 bales of cotton, 2000 barrels of tobacco, and 1500 of sugar, with considerable quantities of indigo and peltry. The inhabitants are generally of French extract, and the women remarkable for fine complexions and teeth, and beautiful hair. French refugees have established boarding schools. The author, though a Frenchman, well satirizes the French fashion of conducting commerce.

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advantages for commerce are incalculable. Though situated one hundred and five miles above the mouth of the Mississippi, a week's sail will convey its trade to Mexico, and the British, French, and Spanish West Indies. Nor can this important settlement fail to become the grand mart and receptacle for the produce of all the prodigious extent of a valuable country on the Missouri, Mississippi, and Ohio.*

Of Virginia, the chief port is Norfolk, but Richmond is the seat of the government, containing about five hundred houses and four thousand inhabitants. It is partly situated on a hill, which also presents the state house. It stands on the river James, near the Rapids, which extend for seven miles, but the inconveniences are remedied by a canal. A bridge of great length, more than a thousand feet, partly raised on boats, partly on timber piers filled with stone, passes to Manchester, on the other side of the river.

Annapolis, in Maryland, is still regarded as the capital of that state, though Baltimore be a more considerable city. Annapolis is the wealthiest town of its size in the United States. Though situated at the mouth of the river Severn, on a healthy spot, its commerce is now inconsiderable. The number of inhabitants does not exceed two thousand, but the houses are generally large and elegant. The state house stands in the centre, whence the streets diverge so as to impart a circular form to the whole town.

Savannah was formerly the capital of Georgia, but contained little more than eight hundred inhabitants. It was succeeded by Augusta, which from two houses in 1780, rose to two hundred in 1787. The new seat of government is Louisville, on the bank of the river Ogeche, about seventy miles from its mouth. The records and legislature were transferred thither in 1795.

* The mouth of the Mississippi was formerly difficult to discover at sea, and De Salle perished from having passed it unawares. At present the harbour master at New Orleans has only published in the American newspapers the following short direction: "The mouth of the Mississippi lies in lat. 29° 5' N. and as soon as you are in sight of the block house, bring it to bear W. N. W. and it will bring you to the bar." Below New Orleans the hurricanes are terrible, and cause great and dangerous inundations of the river: they generally happen in August. Account of Louisiana, p. 15.

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The new towns in the interior may deservedly excite curiosity. Pittsburgh, which stands at the junction of the rivers Alleghany and Monongalia, commands the navigation of the noble river Ohio, and is already a town of considerable trade; the houses, which are built of brick, amounting to more than four hundred. Within ten years, this town has encreased ten-fold, and is now a receptacle of the trade between Philadelphia, Baltimore, and the Western states. Some vessels with three masts, carrying about two hundred and fifty tons, have here been constructed, and pass by the Ohio and Mississippi to the West Indies.*

Marietta did not exist fifteen years ago, but now contains two hundred houses, and is the chief establishment on the Ohio. In the same state, recently admitted into the union under the name of the state Ohio, is the town of Gallipoli, which contains about a hundred houses, the inhabitants being mostly French.†

Knoxville is the chief town in Tennessee, and contains about two hundred houses. Lexington, the chief town in Kentucky, contains about three thousand inhabitants. In 1786 the inhabitants were only computed at nine hundred.

Edifices.

The chief edifices are commonly the halls in which the states of each province assemble. The Capitol, and the house of the president, in the new metropolis, designed, it is believed, as well as the plan of the city, by L'Enfant, are considered as edifices of the most splendid promise.‡

Inland Navigation.

Little occasion has hitherto arisen for opening any canals for inland navigation, as the numerous great rivers have been found sufficient for the purposes of intercourse. No country in the world can boast of superior means of inland commerce by the great river Missouri, and many

* Michaux Voy. à l'ouest des Monts Alleghans. Paris, 1804, 8vo. p. 61.

† Mr. Ellicott, in his Journal, Philadelphia, 1803, 4to. p. 13, describes Gallipoli as a most miserable place, inhabited by a few poor French families.

‡ From the report to the Senate and House of Representatives, Washington, 1804, 8vo. it appears that the President's house and the Capitol had originally been executed in so negligent a manner, as to reflect perpetual disgrace on the builder. The roofs, and even part of the walls, were so faulty, that the demolition of a great part became necessary. The new Arsenal, on the banks of the river Schuylkill, near Philadelphia, also deserves to be mentioned. The report of its contents, Washington, 1805, is formidable.

other

other navigable streams, not to mention lakes of prodigious extent. A canal, it is believed, is now opened between the rivers Shuylkil and Susquehanna, and others are projected. The roads also begin to be improved, and several bridges have been erected, some of which, in timber, are of considerable extent.*

The manufactures of the United States may mostly be considered as still in their infancy, as they were accustomed to be supplied by Great Britain;† and though the bond of authority be broken, the commercial chains remain. The chief manufactures are tanned leather, and dressed skins; various common works in iron and in wood; ships, for which Boston was celebrated; with several articles of machinery and husbandry. Cables, sailcloth, cordage, twine, packthread, bricks, tiles, and pottery,

* "Considerable progress has already been made in opening canals for inland navigation, though the numerous great rivers have been found sufficient for the purposes of general and extensive intercourse. Indeed no country in the world can boast of superior means of inland commerce by the great river Mississippi, and many other navigable streams, not to mention the lakes of prodigious extent. In Pennsylvania, several canals have been projected, but most of them have been laid aside. A very useful one, however, has been completed in this state: this is the Connewaga canal, by which the inconveniences of the falls of that name, in the Susquehanna, are avoided. An important canal upon the Potomac river has also been completed. The Santee canal, in South Carolina, is thought to be equal to any work of this kind within the United States. It was begun in 1792, and completed in 1800, at the expence of not less than one hundred and fifty thousand pounds sterling. It is thirty-five feet wide at the top, sloping down to a width of twenty feet at the bottom, and is calculated to contain a depth of four feet water, capable of passing boats of twenty-two tons.—(See Drayton's View of South Carolina, &c. p. 154, 155, &c.) Many other canals are contemplated in different parts of the Union, particularly one between the great bays of Chesapeake and Delaware. Within a few years considerable improvements have been made in the roads, particularly in Pennsylvania, where excellent turnpikes, little inferior to many of those in Britain, have been completed. Many bridges have also been erected, some of them, particularly in the New England States, of great extent. A fine bridge is now (March 1804) erecting over the river Schuylkill, near Philadelphia. In short, improvements of every kind are rapidly advancing in almost every part of the United States."—Barton.

A new road has been projected, and it is believed will be speedily executed, between the city of Washington and New Orleans, by Franklin C. H.; a common American contraction for Court House. This space exceeds one thousand miles, and may probably soon be run over by stage coaches, which crowd the other American roads.

† The View of the United States, by Tench Coxe, may be consulted for the manufactures, 1794: but he supposes, page 6, that at least nine parts in ten of the people are employed in agriculture; and he justly advises not to force manufactures in countries where agriculture is more profitable—a grand political principle, which the French, in their wish to rival Great Britain in manufactures, seem totally to forget.

MANUFACTURES.

paper of all kinds, hats, sugars, snuff, gunpowder, are also American manufactures; with some utensils in copper, brass, and tin; clocks and mathematical machines, and carriages of all descriptions. The domestic manufactures, in coarse cloths, serges, flannels, cotton and linen goods of several sorts, not only suffice for the families, but are sometimes sold, and even exported; and in most districts a great part of the dress is the product of domestic industry.* Good wines have been made by French settlers on the Ohio from various wild grapes, particularly the black and fox, which grow spontaneously in these regions. The maple sugar is prepared in the northern and middle states, and is deemed by many equal to that from the cane. The recent commotions in Europe have probably driven many able manufacturers to America, where machinery is particularly valuable, as the price of labour is so exorbitant.†

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* The number of persons to whom patents have been issued for inventions and improvements is very considerable, as appears from the report, Feb. 1805: the reader will scarcely believe that they exceed six hundred.—A great proof of national ingenuity.

† “Some of the manufactures of the United States may be considered as having advanced to a mature state; and in regard to these, the ancient monopoly of Great Britain is at an end. Nor does the rivalry of her fabrics, nor those of other foreign nations, prevent a constant, great, and increasing supply from American industry and skill. Foreign manufacturers, settled in the United States, daily enlarge that supply. Passing by every species of meal, boards, staves, shingles, and other simple productions of labour and mechanism, it may be fairly stated, that the United States can supply themselves with all, or much of the following manufactures and fabrics: Every quality of refined sugar, pot and pearl ashes, malt liquors, distilled spirits from fruit, grain, and molasses, starch, wafers, glue, soap, candles, shoes, boots, many gloves, fine, common, and coarse hats, wrought silver and gold, including much plated ware, carriages for pleasure and for draught, ships and boats, coopers’ wares of every kind, saddlery, harness, and trunks, every kind of cabinet ware; lead, brass, pewter, and copper wares, and those of tin, and tin plated, many printed books, blank books, book bindings, much paper hanging and sheathing, printing and writing paper, cables, cordage, twine and packthread, gunpowder, snuff and manufactured tobacco, bricks, tiles, pottery, some slate, wrought marble and stones for buildings, coarse manufactures for cotton, linen, and wool, and some middling, and a few of fine qualities, some hosiery, household manufactures of various qualities and descriptions, a considerable quantity and variety of engravings, carved and gilt works, bolts, spikes, and many nails, chemical and galenical preparations, cannon, muskets, rifles, pistols, bayonets, swords, clocks, and many watches, &c. &c. After repeated estimates, in various forms and on different principles, it is held by persons of information and experience, that the value of all the commodities manufactured in the United States (those from meal and wood not included), is considerably more than that of all the exported American products and manufactures. The progress of this important branch of the national industry is equal to every reasonable expectation. With respect to the finer manufactures, many of them are in their infancy, and many of them are not yet commenced. Not a few will probably be long delayed. Those branches, how-

The chief commerce of the United States is still centered in British ports, though France had a considerable share; and some trade be also carried on with Spain, Portugal, Holland, and the Baltic. That with the East Indies and Africa is inconsiderable. The exports in 1792 amounted to more than twenty-one millions of dollars; the chief articles being pot and pearl ashes, cotton, coffee, flax, dried and pickled fish, whale oil and whale bone, wheat, Indian corn, indigo, sheep, hogs, molasses, tar, turpentine, American rum, tobacco, furs, staves, shingles, planks, boards, and timber in general. The tonnage was in 1789 estimated at 297,468, and in 1798 at 800,000 tons, navigated by near 50,000 seamen.

Upon the termination of the unhappy war in Europe, 1802, the exports were diminished by the loss of the carrying trade; yet during the year previous to the first of October 1803, amounted to fifty-five millions, eight hundred thousand, and thirty-three dollars; the domestic articles being estimated at forty-two millions, two hundred and five thousand, nine hundred and sixty-one; and the foreign at thirteen millions, five hundred and ninety-four thousand, and seventy-two. From Mr. Gallatin's report it appears that the tonnage, on the 31st of December 1802, was eight hundred and sixty-four thousand, five hundred tons. The exports for the year prior to the 1st of October 1800, amounted to

ever, which depend on *labour-saving* machinery, have lately attracted the utmost regard, and will doubtless advance with rapidity within a few years. No country values more than America all the intersting branches of *household* manufactures; and as the females weave in several of the States (and not the men), few countries pursue *family* manufactures to so great an extent. The preparation of the manufactures of the dairy, which may be included under this head, has wonderfully increased within a few years. The butter, for example, exported in the year 1792, was only eleven thousand seven hundred and sixty-one firkins, weighing less than seven hundred thousand pounds; and the cheese in the same year one hundred and twenty-five thousand nine hundred and twenty five pounds. In 1802, the butter was two millions, three hundred and sixty-one thousand, five hundred and seventy six pounds; and the cheese was one million, three hundred thirty two thousand, two hundred and twenty-four pounds, although the consumption of the latter is annually increasing. It is upon the whole manifest, that the acquisition of foreign artists, the ingenuity of native Americans, the discovery of chemical secrets, the introduction of labour-saving machinery, and above all, the vast abundance, and perhaps the redundancy of cotton wool, must annually increase the importance of American manufactures. The exportation within seven years has increased from a few hundred thousand pounds weight to thirty millions in a single year. Cotton wool every where in America presents the strongest temptations to the thrifty housewife, and to the regular manufacturer."—*Barton*.

seventy

COMMERCE. seventy millions, nine hundred and seventy-one thousand, seven hundred and eighty dollars; the highest from any particular state being those from New York, which amounted to fourteen millions, forty-five thousand, and seventy-nine. Of these exports, those to Great Britain were valued at twenty-seven millions, three hundred and ten thousand, two hundred and eighty-nine dollars; those to Spain were about fifteen millions; to the Hanse Towns eight millions; to France only five millions. For the succeeding year, during the European war, ending on the first of October 1801, the exports were to the amount of ninety-three millions, twenty thousand, five hundred and thirteen dollars; of which Great Britain received about forty-two millions, Spain thirteen, France eleven.

In order to attain a clearer view of this interesting subject, which embraces many geographical relations between America and the ancient continent, the following table, published by authority, in March 1805, may be consulted.

*A Summary of the Value and Destination of the EXPORTS of the UNITED STATES
for the Year 1804.*

	Domestic Produce.	Foreign Produce.	Total Value to the Dominions of each Power.
Prussia - - - - -	400,321	776,795	1,186,116
Sweden - - - - -	58,361	64,745	
Swedish West Indies - - -	400,848	168,721	691,975
Denmark and Norway - - -	477,211	1,115,965	
Danish West Indies - - -	1,081,618	642,388	
Danish East Indies - - -	16,073	13,368	3,346,623
United Netherlands - - -	2,064,158	11,757,002	
Dutch West Indies and American Colonies	1,600,667	848,365	
Dutch East Indies - - -	80,176	97,049	16,447,417
England, Man, and Berwick -	8,552,764	1,226,194	
Scotland - - - - -	1,561,350	140,888	
Ireland - - - - -	1,391,333	36,298	
Guernsey, Jersey, Sark, and Alderney	282,212	15,262	
Gibraltar - - - - -	242,248	74,339	
British East Indies - - -	16,452	113,220	
British West Indies - - -	6,315,667	731,991	
Newfoundland and British Fisheries -	175,597	32,666	
British American Colonies - -	807,709	111,263	
Other British Colonies - - -	1,185	364	21,829,802
Hamburg, Bremen, and other Hanse Towns, &c.	949,454	3,525,553	4,475,007
			French

CHAP. III. CIVIL GEOGRAPHY.

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	Domestic Produce.	Foreign Produce.	Total Value to the Dominions of each Power.
French European Ports in the Atlantic	3,139,206	5,384,523	
Ditto, ditto, in the Mediterranean	80,906	220,419	
French West Indies and American Colonies	1,742,368	1,867,522	
Bourbon and Mauritius	120,042	221,125	12,7,6,111
Spanish European Ports on the Atlantic	1,628,079	517,043	
Ditto, ditto, on the Mediterranean	676,114	80,100	
Teneriffe and other Canaries	120,084	61,101	
Florida	60,738	22,886	
* Louisiana	117,430	207,717	
Honduras, Campeachy, and Musquito Shore	149,344	184,829	
Spanish West Indies and American Colonies	1,725,662	1,176,998	6,728,125
Portugal	1,282,169	190,716	
Madeira	586,869	135,802	
Fayal and the other Azores	8,957	8,648	
Cape de Verd Islands	88,273	30,533	
Other African Ports	10,834	46,287	
Coast of Brazil and other American Colonies		107,770	2,196,858
Italy	118,441	1,552,708	1,671,149
Triest and other Austrian Ports on the Adriatic	85,835	247,563	333,798
Turkey, Levant, and Egypt	12,681	31,975	44,646
Morocco and Barbary States	8,657	676	9,33
Cape of Good Hope	108,190	59,727	16,917
China	162,806	35,795	198,601
East Indies (generally)	258,090	538,226	796,316
West Indies (ditto)	2,352,042	972,252	3,324,294
Europe (ditto)	86,827	514,064	620,891
Africa (ditto)	221,788	126,248	349,036
South Seas	10,000		10,000
North West Coast of America	20,641	175,418	196,059

77,699,074

* From the 1st of October to the 31st of December, inclusive.

A Summary of the Value of EXPORTS from each STATE.

	Domestic.	Foreign.	Total.
From New Hampshire	453,394	262,697	716,091
Massachusetts	6,303,122	10,591,256	16,894,379
Vermont	135,903	55,795	191,725
Rhode Island	917,736	817,935	1,735,671
Connecticut	1,486,882	29,228	1,516,110
New York	7,501,096	8,580,185	16,081,281
New Jersey	24,829		24,829
* Delaware	180,081	517,315	697,396

VOL. III.

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Maryland

COMMERCE.

	Domestic.	Foreign.	Total.
Maryland	3,938,840	5,113,099	9,151,939
District of Columbia	1,157,895	294,103	1,452,198
Virginia	5,394,903	395,098	5,790,001
North Carolina	919,545	9,142	928,687
South Carolina	5,142,100	2,309,516	7,451,616
Georgia	2,003,127	74,345	2,077,572
* Territory of the United States	1,729,184	280,239	1,959,423
• Pennsylvania	4,178,713	6,851,444	11,030,157
Dollars,	41,467,477	36,331,597	77,699,074

* Detroit	38,028	—	38,028
Machilimakinac	238,936	—	238,936
Maffac	—	17,320	17,320
Fort Adams, A.	60,127	4,650	64,777
New Orleans *	1,392,093	208,269	1,600,362
Dollars,	1,729,184	230,329	1,959,423

A. Maffac, for the 4th Quarter of 1803.

Fort Adams, ditto, ditto

New Orleans, from the 1st January to the 30th September 1804.

Treasury Department, Register's Office, Feb. 23, 1805.

JOSEPH NOURSE, REGISTER.

Concerning the imports into the United States, it may not appear necessary to enter into such minute details; but the following observations of Dr. Barton deserve attention, though his style might have been greatly improved:—

“ The American importation of manufactures, from the British dominions in Europe and Asia, was little less than twenty-seven millions of dollars in the year 1802; and the imported manufactures, from all other countries, were probably about ten millions of dollars. The wines, teas, salt, distilled spirits, and other unmanufactured produce, from places not British, amounted probably to thirty millions of dollars; and the like unmanufactured articles from the British dominions were probably worth three millions of dollars. The coarse and fine manufactures of the United States (exclusively of all kinds of meal, and of boards, staves, and similar articles of wood), may be safely computed at

* Louisiana exports 20,000 bales of cotton, 45,000 casks of sugar, 800 casks of molasses, besides indigo, peltry, lumber, &c. Account of Louisiana, p. 45.

more than forty millions of dollars. The China trade is considerable; and if cotton wool should be used as an export to Canton, must be greatly increased. The surplus of our cotton in 1803, beyond domestic consumption, is computed at thirty millions of pounds weight. The returns of exports, imports, tonnage, fisheries, and coasters, display, in authentic form, the progress and actual condition of the American trade in all its branches. They are, however, rather evidences of the capacities of the country, than of the courses which its trade will in future take; for the revolutions in the colonies, commerce, and laws of European nations, occasion the United States to seek new channels of vent, and other sources of supply. The improvements of American manufactures too, are constantly diminishing our exportation of raw materials, increasing the importations of such articles, and restraining exportations of provisions and drinks, while they prevent an increase of the importations of foreign manufactures, proportionate to the increasing population.

" In America the balance of commerce appears to be against the country, as the imports are greater than the exports. But this evidence, though it may be deemed positive in other countries, is not so in the United States. The great number of their ships, and the distance between their ports and those of foreign nations, occasion them to receive abroad a vast sum *in freight*. This does not appear in their exports, but is returned in useful goods. The emigrants from the foreign world to America bring hither much property, which is never to be remitted or returned, because the importers make their home in some one of the states. It is highly important to add, that importations of one thousand dollars value each, in mill stones, bolting cloths, stills and worms, mill saws, wire, nails, hinges, locks, bolts, and glass (for example) enable the Americans to bring into active use, and into a productive state, tracts of five hundred acres of land, with seats for saw mills, flour mills, snuff mills, distilleries, and with good soils; which land, in the year 1802, produced nothing, but in 1804 may yield a quadruple interest (for its whole value is improved) in mill-tolls, rents, timber, fossils, and crops. The profit of this course of things is proved by this fact, that although in the year 1690 America did export a surplus of one hundred

COMMERCE.

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COMMERCE. dollars, yet before 1801, in one year, they exported ninety-three millions of dollars, which at the high American interest of six per cent. is the interest of one thousand five hundred millions of dollars; and they at the same time maintained, with as much average comfort as any country on earth, a population of five millions and one quarter."

Bank. "The Bank of the United States was incorporated by act of Congress, February 25, 1791, by the name and style of *The President, Directors, and Company of the Bank of the United States*.* The amount of the capital stock is ten millions of dollars, one-fourth of which is in gold and silver; the other three-fourths, in that part of the public debt of the United States, which, at the time of payment, bears an accruing interest of 6 per cent. per annum. Two millions of this capital stock of ten millions are subscribed by the president, in behalf of the United States. The stockholders are to continue a corporate body by the act, until the 4th day of March 1811; and are capable, in law, of holding property to an amount not exceeding, in the whole, fifteen millions of dollars, including the above ten millions of dollars capital stock. The corporation may not at any time owe, whether by bond, bill, or note, or other contract, more than ten millions of dollars, over and above the sums then actually deposited in the bank for safe keeping, unless the contracting of any greater debt shall have been previously authorized by a law of the United States. The corporation is not at liberty to receive more than six per cent. per annum, for or upon its loans or discounts; nor to purchase any public debt whatever; nor to deal or trade, directly or indirectly, in any thing except bills of exchange, gold or silver bullion, or in the sale of goods really and truly pledged for money lent, and not redeemed in due time; or of goods which shall be the produce of its bonds: they may sell any part of the public debt of which it shall be composed. Loans not exceeding 100,000 dollars may be made to the United States, and to particular states, of a sum not exceeding 50,000 dollars.

"Offices for the purposes of discount and deposit only, may be established within the United States, upon the same terms, and in the same manner, as shall be practised at the bank. Four of these offices,

* Morfe, London, 1794. p. 218.

called *Branch Banks*, have been already established, viz. at Boston, New York, Baltimore, and Charlestown. The faith of the United States is pledged, that no other bank shall be established by any future law of the United States, during the continuance of the above corporation. The great benefits of this bank, as it respects public credit and commerce, have already been experienced."*

The coinage consists of eagles in gold, with a half and quarter, the eagle being valued at ten dollars, or two pounds five shillings sterling, thus exceeding by about one quarter the golden mohur of Hindostan. In silver, besides the dollar, with the half and quarter, there are dimes, or tenths of a dollar, worth nearly sixpence English, and half dimes, or twentieths. The cent in copper is equal to the hundredth part of a dollar, or little more than the English halfpenny; while the half cent nearly corresponds with the farthing.

From the report of the director of the mint, January 1805, it appears that the silver coined greatly exceeded that of 1803, while the gold was equal. The coinage of copper had diminished on account of the high price of that article in Europe; but it is surprising that the states do not order their own mines to be explored. The total amount of the coinage, 1804, was as follows:—

Silver, 191,092 pieces; namely, dollars, half and quarter, and dimes.

Gold, 43,597 eagles, half eagles, and quarters.

Copper, 1,812,159 cents and half cents. The total value being 371,827 dollars.

* In the Sketch of the Geography of the U. S. Phil. 1805, the bank capital is valued at thirty-nine millions of dollars. There are about seventy-five other banks.

Imports	-	-	71,800,000 dollars.	
Exports, Domestic produce	-	-	-	31,840,903
Foreign	-	-	-	39,130,877
				70,971,780

Merchant vessels paying tonnage - 972,492 tons.

CHAPTER IV.

NATURAL GEOGRAPHY.

Climate and Seasons.—Face of the Country.—Soil and Agriculture.—Rivers.—Lakes.—Mountains.—Swamps.—Botany.—Zoology.—Mineralogy.—Mineral Waters.—Natural Curiosities.

CLIMATE.

THE climate of the United territories, as already mentioned, is chiefly remarkable for sudden transitions from heat to cold, and the contrary. The wind from the north-west is violently cold, as it passes a wide expanse of the frozen continent. In the plains on the east of the Apalachian chain the summer heats are immoderate; and in some places even ice will not preserve poultry or fish from putrefaction. Towards the mountains the climate is salutary, even in the southern states, as is evinced by the bloom of the damsels in the back settlements of Virginia. In the northern states the winter is longer and more severe than in England, but the summer heat more intense.* A N. E. wind commonly attends rain, while on the west side of the Apalachian mountains a S. W. has that effect. In Georgia the winter is very mild, snow being seldom seen, and the east wind is there the warmest.

This excessive heat of the plains must be regarded as one cause of that fatal pestilential malady called the yellow fever, which appeared at Philadelphia in 1762, when it raged in New Spain, but with great and alarming force in 1793, and has since too frequently repeated its ravages in various cities of the commonwealth. Several medical men have treated this subject with considerable care and ability, but do not seem to have examined what method of cure was practised in other countries.

* At New York the thermometer is never higher than 86° for twenty four hours together, and the mean heat is 65°. The earth becomes warmer as the forests are eradicated, the sun warming the surface. This plain fact, together with the accumulation of ice at the poles, affords an argument, seemingly conclusive, against the central heat of the earth, and the theories is founded upon that supposition.

Alzate,

Alzate, in his fugitive remarks on the natural history of Mexico, has mentioned an 'epidemical distemper, called in the Mexican language *matlazabualt*; but at Vera Cruz, Carthagena, and other places, known by the name of the black vomit, which is the chief scourge of the kingdom of Mexico.' In 1736 and 1737 it swept away above one-third of the inhabitants of the capital; and in 1761 and 1762 it almost depopulated the kingdom. Alzate thinks that this disorder proceeds from the bile mixing with the blood, the patient often bleeding at the nose and mouth; and a relapse is extremely dangerous. He dissuades purgatives and bleeding, as when used for other disorders they superinduce the *matlazabualt*, which in Mexico always begun among the Indians, and was chiefly confined to them. May not this disorder be as much allied with the yellow fever as the black and yellow jaundice? The Spanish physicians might at any rate be consulted, as they have long been accustomed to the American maladies; and it is hoped that this hint may not be unsubserving to the interests of humanity.

The rapid transitions of the climate, sometimes amounting to 30° in a short space of time, seem to be rivalled in Japan and the north of China, which have a similar position on a great width of sea to the east, but which are nevertheless the most populous and flourishing countries in the world. The Japanese, according to common account, wear ten or a dozen silk robes fastened by a girdle round the waist; and if the weather suddenly become warmer, they throw down one or more which hang suspended by the girdle, and are easily readjusted if the air become suddenly cold. Thus in the course of a few hours they are sometimes covered with only one robe, or with a dozen; in effect, a preservative against the variations of the climate.

Towards the Mississippi the climate is warmer by 3° than that on the Atlantic coast, as is evinced by the vegetation. The most prevalent winds are the north-west, south-west, and north-east.*

* D'Autroche, Voyage to California, p. 79. Ulloa, liv. iv. c. vi. says that the black vomit was not known till 1740, and is thought to have been imported by the galleons from Manilla.

• In reasoning upon their influence, Volney displays his usual ignorance, in supposing that the Ardennes in Flanders is a chain of mountains, and that Russia has no chain of mountains on the east; totally forgetting those of Ural! After this who shall wonder that he supposes the old Egyptians to have been negroes, and finds that the splendid heroes of Homer resembled the naked painted savages of North America?

CLIMATE.

An intelligent gentleman, Mr. Warden, has sent me a calendar of the weather, vegetation, agriculture, and diseases, kept at Kinderhook, in New York, from May 1800, to August 1801, from which the nature of this work will only permit a few extracts. Between April 20 and May 1, most of the migratory birds made their appearance. Some wheat was reaped on the 15th of July, and the harvest was completed on the 11th of August. On the 21st of September most of the winter seeds were sown. The pigeons had all migrated before the 17th of that month. October was unpleasant, with high winds from the south. On the 28th of November there was a hard frost, and on the 30th a considerable fall of snow. On the 27th February, 1801, the river Hudson began to open, having been frozen to a great depth; on the 24th the robin had appeared; and on the 26th the blue bird. On the 19th of March the lilac began to open its flowers. The phoebe bird and swallow appeared on the 3d of April; the martin on the 4th; the king bird and yellow bird on the 10th; the eagle, gull, kingfisher, and lark on the 12th: on the 14th of April the apple trees and pear trees began to open the flower bud. Fahrenheit's thermometer was 70° at noon in the shade. About the middle of May the mosquitoes began to be troublesome. The harvest in 1801 began on the 3d July, and was generally completed on the 20th of that month. On the 10th of September the thermometer was at 90°.

The same gentleman furnished me with calendars for 1802 and 1803, kept at Esopus, which is further to the south. The greatest heat in June 1802 was 89°, in July 92°, in August 90°. The dysentery was the prevailing disease, and often fatal. The wheat and rye were all cut by the 1st of August; oats by the 17th. The Indian corn was ripe on the 1st of October, when the farmers also began to sow wheat and rye: on the 20th October the buck wheat was all cut, and the maize brought from the fields on the 2d of November: on the 14th of that month the trees were in general bare of leaves. In the calendar of 1803, I find that hay began to be made on the 12th of July, and the wheat and rye harvest on the 14th. The latter grains were sown in the middle of September.

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The seasons in the United States generally correspond with those in Europe, but not with the equality to be expected on a continent; as, even during the summer heats, single days will occur which require the warmth of a fire. The latitude of Labrador corresponds with that of Stockholm, and that of Canada with France, but what a wide difference in temperature! Even the estuary of the Delaware is generally frozen for six weeks every winter. Nor does the western coast of North America seem warmer than the eastern. The numerous forests, and wide expanses of fresh water, perhaps contribute to this comparative coldness of the climate, which may gradually yield to the progress of population and industry.*

The face of these extensive territories is not so minutely diversified as might have been expected, the features of nature being here on a larger and more uniform scale than in Europe. Nor are there any scenes of classical or historical reminiscence, which transport the mind to remote centuries, and impart a crowd of relative ideas. The abundance of timber, giving the idea of one immense and primordial forest, and the diversity of the foliage, contribute greatly to enrich the landscape; but it is here reputed a weed, and the planter seldom sows trees near his habitation, as the roots having no great room to spread or penetrate, they would be dangerous during a violent wind. "What a beautiful country, not disgraced by a single tree," is an idea purely American. The landscape is less ennobled by lofty mountains than by rivers of great magnitude; and is frequently injured by the barren aspect of large fields, which have been exhausted by the culture of tobacco, and which scarcely produce a weed or a pile of grass.† The northern provinces, called New England, are generally hilly, as they approach the skirts of the Appalachian chain, which has, by no unfit similitude, been called the spine of the United territory. The vales in these northern regions are thickly clothed with wood, and often pervaded by considerable rivers; and many romantic cascades are formed by rivulets falling from the rocks, while towards the shore the land is level and sandy. In Virginia,

Face of the
Country.

* In New Hampshire they reckon upon eight months of cold weather in the year, a proportion not uncommon in England. Belknap, vol. iii. p. 19.

† The North Western Territory, on the rivers Wabash and Illini, presents immense level meadows.

FACE OF THE
COUNTRY.

a central state, the Blue Mountains, and other ridges of the Apalachian, add great charms and variety to the prospect, which is further enlivened by many beautiful plants and birds, particularly the humming bird, sucking the honey of various flowers, and rapidly glancing in the sun its indescribable hues of green, purple, and gold. Here a plain from 150 to 200 miles in breadth, reaching from the mountains to the sea, is studded with the villas of rich proprietors, the ancient hospitable country gentlemen of the United States. Similar levels appear in the Carolinas and Georgia. Beyond the Apalachian ridges extends another rich plain of amazing size, pervaded by the muddy waves of the Mississippi, which does not appear to be table land, but on nearly the same level with the eastern plain. In Kentucky the surface is agreeably waved with gentle swells, reposing on a vast bed of limestone; and a track of about twenty miles along the Ohio is broken into small hills and narrow vales.

Soil.

The soil, though of various descriptions, is generally fertile, often, on the east of the Blue Mountains, a rich brown loamy earth, sometimes a yellowish clay, which becomes more and more sandy towards the sea.* Sometimes there are considerable marshes, and what are called salt meadows, and spots called barrens, which, even in the original forests, are found to be bare of trees for a considerable space.† On the west of the Apalachian chain the soil is also generally excellent; and in Kentucky some spots are deemed too rich for wheat, but the product may amount to sixty bushels an acre: and about six feet below the surface there is commonly a bed of limestone. The vales in the northern states are also very productive.

Agriculture.

In agriculture the Americans are well skilled, and are eager to adopt the advantages of English experience. The late great president Washington was himself an excellent farmer; and it is computed that at least

* The summits of the mountains are frequently marshy, and haunted by aquatic birds, while the valleys below are dry. This circumstance is owing to the hard rock, two or three feet under the surface of the mountain, which is impenetrable by water. Belknap's New Hampshire, vol. iii. p. 34.

† Pine barrens produce pines only. From Mr. Sibbald's Notes on the Pine lands of Georgia, Augusta, 1801, 8vo. it appears that the pine lands in that state are far from being so barren as is commonly conceived, the chief staple, cotton, thriving very well on them. Among the fruits cultivated in Georgia are figs, almonds, grapes, olives, capers, oranges and lemons. Ibid. p. 17.

three parts in four of the inhabitants of the United States are employed in agriculture. This free and vigorous yeomanry may well be regarded as the chief glory of any state; and commerce will import sufficient opulence to enable them to promote every possible improvement. Agriculture particularly flourishes in New England and Pennsylvania. The practice of land-jobbing, and other tendencies to monopoly, ought carefully to be repressed: such however is the progress of agriculture, that the states are enabled, almost yearly, to increase the exportation of grain and flour. In 1786 Pennsylvania exported 150,000 barrels of flour; in 1789 no less than 369,618 barrels. Among the numerous products are wheat, rye, barley, buck wheat, oats, beans, pease, and maize, the last a native grain. In Virginia some rice is cultivated, and is found to succeed well on the banks of the Ohio. The German spelt, a valuable product, is also sown in Pennsylvania; and in several provinces hemp and flax are considerable objects of agriculture. The culture of turnips, and some other vegetables common on English farms, seems as yet to draw little attention; but many cultivated grasses are sown, and in Virginia there are lucern, cinquefoil, burnet, red, white, and yellow clover, &c.* That invaluable plant the potatoe is a native of the country; and there is a sort called groundnuts, which some particularly relish. There are several kinds of melon and cucumber. Hops are also cultivated: and it is almost unnecessary to add tobacco, a well known product of Virginia, which opulent province bears a considerable resemblance in culture and manners to our West Indian settlements. Orchards are favourite objects; and cyder is a common beverage in the northern and middle states. The excellent Newtown apple grows near New York. Peaches are greatly cultivated in Virginia, where the peach brandy is noted; and there are also excellent apricots and nectarines.†

The

* Particularly the red clover (*trifolium pratense*). This is not only sown for the purpose of a pasture grass and for hay, but also as a manure for land. With this latter view it is much attended to in Pennsylvania. In the maritime parts of Virginia they sow, with the same intention, a native species of cassia, called the magotty bay-bean, partridge pea, &c.—*Barton*.

† In many parts of the United States, the peach trees are greatly injured by the *larva* of a peculiar insect. But peaches, not inferior to the finest fruit of this kind in Europe, abound in some parts of New York, Pennsylvania, &c.—*Barton*.

RIVERS.

The chief rivers of the United States have already been described in the brief general view of North America; but a few may be here mentioned of a more confined course, and more particularly belonging to the United territory. That great western boundary the Mississippi, besides the celebrated Ohio, pervading the centre of the United territory from east to west, receives many other considerable streams, among which is the Illini, or in the French mode Illinois, which waters extensive and fertile meadows. More northern streams, flowing into the Mississippi are the Wisconsin, the Chipaw, and the river St. Croix. The noble stream of the Ohio receives from the north the Great and Little Miami, and the Wabash: from the south the Great Kenneway, the Kentucky, the Green River, and above all the Cumberland and the Tennessee; while the country on the west of Georgia is watered by several streams which join the gulf of Mexico.

Among the numerous rivers which flow, on the east, into the Atlantic, may be mentioned the liminary stream of St. Croix, the Penobscot, the Kennebec, the Saco, the Merimac, the Connecticut, a long and distinguished stream, which gives name to the province, but which yields in length and grandeur to the Hudson river, which rising from several lakes in the northern parts of New York, flows into the ocean near the flourishing city of that name. The river Delaware, which washes Philadelphia, being joined by numerous streams, is more remarkable for its width than for the length of its course. The Susquehanna, or Suskanna, is distinguished by both these attributes, and after a long and

It is generally believed in America that their peach trees came from Europe. Hennepin tells us in his journey (*Voyages au Nord*, ix. 273), that he found peaches quite common on his voyage down the Mississippi, and so prolific, that the savages were obliged to support the branches with forks. He is speaking of Louisiana in general, and refers us to his description of Louisiana. Hennepin was a monk who quarrelled with the French governor De Salle, pretending to have failed down the Mississippi before that celebrated officer had made the attempt. He has become obnoxious to the French authors, not only upon this account, but because he abjured all allegiance to France; pretending, as a native of Flanders, to be a subject of the Emperor: nay, to the great surprise and terror of the Jesuits, he advised William III. king of England, to send missionaries among the savages. Mr. Ellicott, in the preface to his journal, has pointed out a discordance in Hennepin's dates, which tends greatly to invalidate his account. Yet that the peach tree is a native of America may seem probable from Sibbald's Notes on the Pine lands of Georgia, p. 15. where he mentions that the *Indian* peach generally weighs from twelve to fourteen ounces.

circuitous

circuitous progress, forms the chief contributory stream to the bay of RIVERS.
 Chesapek; which also receives the Patomak and the Fluvanna, or James Patomak.
 River. The Patomak is not only distinguished as the seat of the new
 capital, but for its irruption through the Blue Ridge of the Apalachian
 Mountains, being first joined by the Shenandoa, a considerable river
 from the south. The range however consists of broken rocks, and the
 scene yields greatly in sublimity to the passage of the Lauricocha, or false
 Maranon, through the Andes, worn into perpendicular walls of stu-
 pendous height and length. Further to the south the chief rivers flow
 W. into the Ohio. But the Black water and Staunton join the Roanok
 inlet: and Pamlico sound receives a river of the same name. That of
 cape Fear, the Pedee, the Santee, the Savannah, and the Altamaha of
 Georgia, close the list of the chief rivers of the United States.

Besides the great lakes which form the northern boundary, and which Lakes.
 have been already mentioned in the general description of North Ame-
 rica, there are some considerable lakes in the northern parts of the United
 territory. Those on the west have been little explored. The small
 lakes called Cedar, Little Winnipeg, and Leech, supply the sources of
 the Mississippi. On the east the most important lake is that of Cham- Champlain.
 plain, rather resembling a wide river, which flows into that of St. Law-
 rence, and supplies an easy communication with Canada. The Cham-
 plain is the boundary between the states of New York and Vermont,
 being in length about 75 g. miles, while the breadth seldom exceeds
 four or five; and it terminates in the broad river called Chambly or
 Richlieu, which falls within the limits of Canada. Lake George, at the
 southern extremity of Champlain, approaches within a few miles of the
 Hudson river, so that a canal might be opened at no great expence.
 Besides many small lakes S. W. of the Champlain, there are several
 other lakes in the same direction, and also in the province of New York,
 as the Oneida, the Cayuga, and Sennaka.*

The chief mountains have been likewise described in the general view Mountains.
 of North America. The White and Green mountains in the northern
 provinces, and the Land's Height, which bounds the district of Main,
 may be regarded as elongations of the Apalachian chain, to which also

* In New Hampshire the unpronounceable lake of Winipiseogee, which may well be contracted
 to Winigee, is twenty-two miles in length, and eight at the greatest breadth. Belknap, vol. iii.
 p. 69.

belong

MOUNTAINS belong the Savage and Bald mountains, and the Allegany, so called from another name of the river Ohio, (sometimes extended to the whole Apalachian,) with many other local denominations, the Blue mountains being the most general term for the exterior ridge towards the ocean.*

Forests.

Aboriginal forests are so numerous throughout the United territory, that none seem to be particularly distinguished.† There does not appear to exist, on the whole continent of America, any of those sandy deserts which are so remarkable in Asia and Africa. There is, on the contrary, an exuberance of water, even in the most torrid regions; which might be added as a proof of the theory that this continent has more recently emerged. Even the volcanoes in South America often pour down torrents of water and mud, and no where occur the sandy ruins of plains, after the fertile soil has been totally lost, or the rocky skeletons of ancient mountains. The large tract in the eastern part of Virginia and North Carolina, called the Dismal Swamp, occupies about 150,000 acres; but it is entirely covered with trees, juniper and cypress,

**Dismal
Swamp.**

* The component parts of the White Mountains seem to be slate, petrosilex, and grey quartz, or perhaps granite. Morfe, p. 293. See, in Belknap's Hist. of New Hampshire, vol. iii. p. 39, &c. a particular description of the White Mountains, which he says form the most elevated part of a ridge, extending N. E. and S. W. to an immense distance. But this description does not accord with his own map, in which they are detached; or other maps, in which the great chain passes further to the north. The base of the White Mountains, which present four principal summits, is about sixty miles in circuit. The rocks seem to be flint, or rather genuine petrosilex, the hornstein of the Germans, and slate, or argillaceous schistus. The former seems to be also what our author calls quartz, of a dark grey colour, with very small shining specks, which may be mica or felspar. From the highest pinnacle there is a view of the Atlantic, at the direct distance of sixty-five miles. Some rocks are polished like a mirror, by the constant trickling of water over them; an incident which may explain a similar appearance near the monastery of St. Bernard, observed by Saussure, though the water has there ceased to flow. A singular circumstance was the appearance of a new river, during continual rains, in October 1775, and which has since continued a perennial stream. The other rivers at the same time overflowed their banks, presenting, what in the old English of America are called *fryfets*; that is, little inundations. The Blue Mountains are sometimes inaccurately called the South mountains, while the Apalachian chain is called the North mountains, and, from an Indian term, the Endless mountains. It appears from repeated passages of Kalm that they chiefly consist of what may be called calcareous granite, or mingled limestone, quartz, and mica. The river Hudson cuts directly across the high ridge of mountains. Kalm, p. 77.

† In some parts the old growth is red oak, or white ash, while the new is beech and maple, without any young oak or ash among them. Belknap, vol. iii. p. 130. Similar changes have been observed in the forests of France, which now often present very different timber from that mentioned in ancient charters. Is this singularity owing to some change in the soil?

on

on the more moist parts, and on the drier white and red oaks, and a variety of pines.* These trees attain a prodigious size; and among them there is often thick brushwood, so as to render the swamp impervious, while other forests in North America are commonly free from underwood. Cane reeds, and tall rich grass, soon fatten cattle of the vicinity, which are taught to return to the farms of their own accord. In this swampy forest bears, wolves, deer, and other wild animals abound; and stories are told of children having been lost, who have been seen, after many years, in a wild state of nature. Some parts are so dry as to bear a horse, while some are overflowed, and others so miry that a man would sink up to the neck. A canal has been led through it; and even in the dry parts water of the colour of brandy, as is supposed from the roots of the junipers, gushed in at the depth of three feet. In the northern part the timber supplies an article of trade, while in the southern rice is found to prosper; and in the neighbourhood none of these diseases are known which haunt other marshy situations.*

Georgia presents a singular marsh, or in the wet season a lake, called Ekanfanoko, by others Ouaquafenoga,† in the S. E. extremity of the province. This marshy lake is about 300 miles in circumference, and contains several large and fertile isles, one of which is represented by the Creek Indians as a kind of paradise, inhabited by a peculiar race, whose women are incomparably beautiful, and are called by them daughters of the sun. These islands are said to be a remnant of an ancient tribe, nearly exterminated by the Creeks. Such events may not have been uncommon among savage tribes; and the more industrious people who erected the noted forts may have been passing, like the Mexicans, to a comparative state of civilization, when an unhappy defeat, by more savage tribes, extinguished their name and power. That the natives have

* Weld, i. 179.

* On the N. E. of the Chesapek is another of great extent, called Cedar Swamp; and some other large swamps occur in the southern states.

† Such long and barbarous appellatives, derived from savages who have a word of fourteen syllables to express the number *three*, are not unfrequent in North American geography, and ought to be abbreviated, and reduced to a fixed orthography, by some learned society.

SWAMPS.

no memory of such transactions is not matter of wonder, for their traditions can scarcely exceed a century or two at the utmost.*

Botany.

A country that experiences on one frontier the severity of the Canadian winters, and on the other basks in the full radiance of the West Indian summers, may naturally be expected to contain no small variety of native plants. So numerous and important indeed are they, as to render it impossible, in a work not devoted particularly to the subject, to notice them as they deserve; we must therefore be contented with the selection of such alone as, from their utility and beauty, have the strongest claim to our attention.†

The botany of these states, including the Floridas, or, in other words, of the whole region extending eastward from the Mississippi to the ocean, and southward from the river St. Lawrence, with its lakes, to the gulf of Mexico, may be divided into those vegetables which are common to the whole country, and those that occupy only particular parts.

The most generally diffused species among the timber trees are the willow-leaved oak (*quercus phellos*) growing in the swamps; the chestnut oak (*q. prinus*), which in the southern states attains an enormous size, and is almost as valuable for its sweet farinaceous acorns as for its wood; the white oak; the red and the black. Next to these in rank are two kinds of walnut, the black, and the white or the hickory, esteemed for its oily nuts. The chestnut and beech of Europe are also found abundantly in the American forests. The tulip tree and *sassafras* laurel, more impatient of cold than the preceding, appear as shrubs on the Canadian borders, rise into trees in the midland states, and on the warm banks of the *Altamaha* attain the full perfection of stateliness and beauty. The sugar maple, on the contrary, is seen only on the northern sides of the hills in the southern states, and increases both in size and frequency in the more bracing climate of the New England provinces. The sweet gum tree (*liquidambar styraciflua*), the iron wood (*carpinus ostrya*), the nettle tree (*celtis occidentalis*), the American elm, the *robinia pseudo-*

* The swamp called Okefonoke gives source to the rivers St. John and St. Mary, and is the scene of ridiculous traditions. Ellicott, 279.

† Forster, *Flora Americæ Septentrionalis*.—Walter, *Flora Caroliniana*.—Bartram's *Travels*.—Kalm's *Travels*.

cacia and red maple, the black poplar, and the taccamahacca, appear in every state of the Union wherever the soil is suitable, without being much affected by variety of climate. The light sandy tracts, both wet and dry, are principally inhabited by the important and useful family of pines; of these the chief species are the Pennsylvanian fir, the common and the hemlock spruce fir; the black, the white, and the Weymouth pine; and the larch: nearly allied to which are the arbor vitæ, and the juniperus virginiana, the red cedar of America.*

Such of the common herbaceous plants and low shrubs as are best known to the generality of readers from their introduction into the gardens of Great Britain, are the collinsonia, used by the Indians against the bite of the rattlesnake, the lobelia cardinalis, the thornapple, the Pennsylvanian lily and golden martagon, the biennial oenothera, with many species of aster, monarda, and rudbeckia.

The mountainous ridges are not sufficiently high to be rich in alpine plants; their climate however is sensibly cooler than that of the plains, on which account those of the south are inhabited by the vegetables of Pennsylvania and the northern states, while the highlands of these abound in the plants of Canada.

But the glories of the American flora are principally confined to Virginia and the southern states; it is here that the unfading verdure of the wide savannas, the solemn magnificence of the primeval forests, and the wild exuberance of the steaming swamps, offer to the astonished ad-

* The most noble of the American trees is the mast pine, sometimes rising to the height of two hundred feet, perfectly straight, and without branches, except at the top. It is from twenty to forty inches diameter at its base, and appears like a lofty pillar, adorned with a verdant capital, in the form of a cone. Belknap, vol. iii. p. 73.

Near the Ohio the *platanus occidentalis*, or platane, is sometimes forty-seven feet in circumference. Mich. Voy. Paris, 1804. p. 92. The expense of clearing the lands is often paid by the pot-ashes yielded by the burnt trees. Ib.

The smaller trees and shrubs that are dispersed through different parts of the United States, among a multitude of others, consist of the following: different species of kalmia, rhododendron, andromeda, vaccinium, laurus, the horse-sugar (*hopera*), the beautiful franklinia, the fringe tree (*chionanthus*), the halesia, dirca, and various species of sumach.—Barton. This ingenious author has well corrected some mistakes in the botany, but should have consulted the preface, where he would have found that this part of the work is not written by Mr. Pinkerton.

BOTANY.

miration of the botanist every thing that by colour, by fragrance, and by form, can delight the senses and fix the attention.

Among the vegetables that inhabit the low shores of the Floridas, Georgia, and South Carolina, may be distinguished the mangrove tree, the only shrubby plant that can flourish in salt water, and the fragrant and snowy-flowered *pancratium* of Carolina.

The low ridges of calcareous soil running parallel with the rivers, and rising from the level savannas into extensive lawns and swelling hills, are generally covered with open or entangled woods, except where they have been converted into tillage by the industry of the inhabitants. In these rich tracts grow the lofty palmetto, the evergreen oak, the sweet bay (*laurus borbonia*), the benzoe laurel, the common laurel, the wide shading broom pine, and the red cedar. The stait silvery columns of the papaw fig, rising to the height of twenty feet, and crowned by a canopy of broad sinuated leaves, form a striking feature in this delicious scenery; while the golden fruit and fragrant blossoms of the orange, first introduced by the Spanish settlers, and now completely naturalized, here realize the ancient traditions of the groves of the Hesperides. Superior however to all these is the towering magnificence of the great magnolia: in this rich marly soil it rises above a hundred feet, with a perfectly erect trunk, supporting a shady conical head of dark green foliage: from the centre of the coronets of leaves that terminate the branches, expands a large rose-shaped blossom of pure white, which is succeeded by a crimson cone, containing the seeds of a beautiful coral red colour, and these falling from their cells remain for several days suspended from the seed-vessel by a silky thread, six inches or more in length, so that whether in this state, or in blossom, it is second to none for grandeur and beauty.

The level plains by the sides of rivers, and therefore generally in a flooded state during the whole rainy season, are called savannas. The trees that grow upon them are of the aquatic kind, such as magnolia glauca, or beaver tree, American olive, and *gordonia lasianthus*, silvered over with fragrant blossoms: these are generally either single, or grouped together into small open groves, while the larger part of the meadow is

overgrown with long succulent herbage, intermixed with shrubs and plants; the candleberry myrtle, with numerous species of azaleas, kalmias, andromedas, and rhododendrons, arranged by the hand of nature into thickets and shrubberies, entwined and over-arched by the crimson granadilla, or the fantastic clitoria, here display their inimitable beauties in full luxuriance. The sides of the pools and the shallow plashe are adorned by the bright cærulean flowers of the ixia, the golden blossoms of the canna lutea, and the rosy tufts of the hydrangia, while the edges of the groves, and the dubious boundaries of the savannas, rising imperceptibly towards the forests, are fringed by innumerable gay varieties of the phlox, by the shrinking sensitive plant, the irritable dionæa, the glowing amaryllis atamasco, and the impenetrable ranks of the royal palmetto (*yucca gloriosa*).

The swamps are at all times, even in the height of summer, for the most part under water, and are distinguished from the rest of the country by the crowded stems of the cane (*arundo gigantea*),* the light foliage of the tupelo tree (*nyssa aquatica*), the taccamahacca, the fringe tree, and the white cedar (*cupressus disticha*); this last is perhaps the most picturesque tree in all America: four or five enormous buttresses or rude pillars rise from the ground, and unite in a kind of arch at the height of about seven feet, and from this centre there springs a stait column eighty or ninety feet high, without a branch: it then divides into a flat umbrella-shaped top, covered with finely divided leaves of the most delicate green. This platform is the secure abode of the eagle and the crane; and the oily seeds contained in its cones are the favourite repast of the parroquets that are constantly fluttering around.

Hundreds more of interelling plants yet remain, and we might go on to describe with unabated pleasure the profusion of various coloured lupines and dwarf palmettos that relieve the dusky hue of the pine forests in which they live; the wild vines, the gourds, the bignonias, and other climbers that display to the sun their fruits and glowing blossoms above the summits of the tallest trees; we might describe the tent-like shade of the platanus, the regal splendour of the crimson-flowered horse-chestnut,

* Near the town of the Natchez the country is covered with canes from twenty to thirty-five feet in height. Ellicott, 181.

BOTANY.

and the humbler, less obtrusive, yet not less exquisite beauties of the meadia, the spigelia (Indian pink), and gaura, but these our limits will not admit; it is enough for the present purpose to have sketched some of the characteristic features in the botany of a country the most accessible of all the warmer climates to the investigations of European science.*

Zoology.

The domestic zoology of the United States nearly corresponds with that of the parent country, with some few shades of difference in size and colour. Among the larger wild animals may be mentioned the bison, large herds of which used to be seen near the Mississippi, and they were once very numerous in the western parts of Virginia and Pennsylvania. The musk bull and cow only appear in the more western regions, beyond the Mississippi. Among the animals now lost are classed the mammoth, whose enormous bones are particularly found near the salt springs upon the Ohio; and teeth of the hippopotamus are said to have been dug up in Long Island: but the labours of a late French naturalist have evinced that such remains often belong to animals long since extirpated, and of which he has traced more than twenty kinds. The mammoth of America, though armed with tusks of ivory, has been supposed to be even five or six times larger than the elephant; but the bones are probably the same with those of the supposed elephant found in Siberia. The moose deer are become extremely rare, and will probably in no long time be utterly extirpated, as the wolf and boar have been in Britain. The black moose deer are said to have been sometimes twelve feet in height, while the species called the grey seldom exceed the height of a horse. Both have large palmated horns, weighing thirty or forty pounds. Mr. Pennant mentions a pair that weighed fifty-six pounds, the length being thirty-two inches.¹ The moose deer is only a large species of the elk, and is found in the northern parts of the United States; while the rein deer inhabits the northern regions of British America. The American stag rather exceeds the European in

* The valuable root called ginseng is found from Lower Canada down to Georgia; and the method of curing has been recently greatly improved, so that it forms an article of considerable commerce to China. Mich. 183.

¹ A. Z. i. 18.

size, and is seen in great numbers feeding in the rich savannas of the ZOOLOGY.
Missouri and Mississippi, where there are also herds of that kind called the Virginian deer.

In the northern states are two kinds of bears, both black; but that carnivorous animal called the ranging bear is found in all the states, as is the wolf. Several kinds of foxes are also seen: and the wolverine seems a kind of bear. The animal most dreaded is the catamount, or cat of the mountains, found in the northern and middle states, and is probably the same with the *puma* of Pennant, which he says is sometimes in North America called the panther. One killed in New Hampshire was six feet in length, and the tail three; but the length of the leg did not exceed twelve inches. The *cougar* is about five feet in length, and in the southern states is called the tiger: but it is well known that the ferocious animals of the new continent are totally different from those of the old, there being neither lions, tigers, leopards, nor panthers, in the whole extent of America. A German missionary,* who resided twenty-two years in Paraguay, describes the tiger of that country as marked with black spots, sometimes on a whitish, sometimes on a yellowish ground; and says that as the lions of Africa far exceed those of Paraguay, so the African tigers greatly yield in size to the American; which may be just, as the royal tiger seems peculiar to Asia. But he adds that he has seen the skin of a tiger three ells and two inches in length, or equal to that of a large ox. This animal easily carries off a horse or an ox; and seems to exceed in size any American beast of prey admitted in the system of Buffon, whose fondness for theories is often to be lamented; and his *jaguar*, or American tiger, seems only a diminutive species.*

The lynx, the ocelot, and the margay, are smaller beasts of prey, of the cat kind. These and many other animals supply furs. The beaver is well known from the fur, and the singular formation of his cabin, built in ponds for the sake of security; but he seems to feed on the twigs of trees, and not on fish, as commonly supposed. This industrious animal is found in all the states, and is somewhat imitated by the musk rat,

* Dobrizhoffer de Abiponibus, vol. i. 283. Vienna, 1784. 8vo.

* Perhaps from Cayenne: but such exported animals are always small, and zoology is not much assisted by a menagery.

ZOOLOGY. who likewise builds his hut in shallow streams. Some kinds of monkies are said to be found in the southern states. The morse or sea cow, and the seal, used to frequent the northern shores; and the manati, common in South America, is said sometimes to appear on the southern coasts: this animal, which has fore feet like hands, and a tail like a fish, while the breasts of the female resemble those of a woman, seems to be the mermaid of fable.*

Among the birds there are many kinds of eagles, vultures, owls; and numerous sorts called by European names, though generally different in the eye of the naturalist. The bird called a turkey is peculiar to America, and abounds in the north.¹ They were brought from Mexico to Spain, and from Spain to England about 1524; the African poultry, or *meleagrids*, of more ancient authors, being Guinea fowls. There are also birds which resemble the partridge, ptarmigan, and quail, of Europe. Virginia abounds with beautiful birds, among which is the humming bird, as already mentioned, while the wakon resembles the bird of paradise:² and it may be conceived that vast varieties of aquatic birds crowd the numerous lakes and rivers, the largest being the wild swan, which sometimes weighs thirty-six pounds. Some of the frogs are of remarkable size; and the tortoise, or turtle, supplies a delicious food, while the alligator is not unknown in the southern rivers. Of serpents Dr. Morse enumerates near forty kinds found in the United territories, Virginia, in particular, producing great numbers. The rattlesnake is the largest, being from four to six feet in length, and is one of the most dreaded. Among the fish are most of those which are esteemed in Europe; and among those that are peculiar may be mentioned that large kind of white trout found in the lakes.

* Among the animals common in North America, may also be enumerated the grey fox, the fox of Virginia, the skat, the cat of New York, the coase, the manitou, six kinds of squirrels, which greatly injure the maize plantations. The hare of America differs from European. The bison, or American ox, delineated by Hernandez and Buffon, and well described by Hearne, although he has a hump on the back, is a species very distinct from the zebu of India and Africa, and from the bisons of the north of Europe. The American breed has always the neck, shoulders, and under part of the body covered with thick wool, a long beard under the chin, and a short tail. This breed also differs from the little musked cattle of the most northern part of America, which in the singular form of their horns approach the buffaloes of the Cape of Good Hope. *Walckenaer's Notes on the French Translation*, v. 545.

¹ Pennant, A. Z. i. 349.

² Morse, 169.

The mineralogy of the United States is yet far from being completely explored, and only imperfect notices can be given. MINERALOGY.

Rich mines of gold or silver, so common in the adjacent Spanish territories, have not yet been discovered in any part of the United States.* Yet gold has been found in considerable quantities in the county of Cabarrus, in the state of North Carolina,† in so much, that of the gold coinage 1804, about eleven thousand dollars in value were the produce of virgin metal from that country. The director of the mint observes, that "It is to be regretted that this gold is melted into small ingots before it is sent to the mint, for the convenience of carriage; but by which, there is reason to believe, a considerable proportion of it is wasted. It is also said, that the finest particles are neglected, and only the large grains and lumps sought after." At Philipsburg, in New York, there is said to be a silver mine, producing that metal in a virgin state; but as no specimens occur in European cabinets, it is probable that this is only a vague report. It is also said that a lump of gold ore was found near the falls of the river Rapahanoc, in Virginia, probably rolled down from its source, or that of some tributary rivulet. It is to be regretted that the government does not employ expert European miners to examine the countries where rich minerals are supposed to exist.

Copper ore is said to appear in Massachusetts, and in New Jersey a rich copper mine was long wrought, pretended to have been discovered by a flame visible in the night, like one of the gold mines in Hungary. This circumstance, sometimes authenticated, may arise from decomposing pyrites. Native copper is found on the river Tonnagan, which runs into lake Superior.‡

Lead is said to appear on the bank of the river Connecticut, two miles from Middleton, and is even said to have been wrought, but abandoned on account of the expence. Lead is also said to appear in the province of New York, but the materials in general supplied by Dr. Morfe upon

* Morfe, p. 391.

† Report, Washington, 1805, 8vo.

‡ According to Imlay, p. 135, there is a very rich vein of copper on the river Wabash. Dr. Barton says, that a bed of cinnabar has been discovered in Virginia. Sulphur is found in New York and other parts. Plumbago, arsenic, and antimony, are observed in South Carolina.

the important subject of mineralogy are brief, inexact, and unsatisfactory.

In the Shawangunk mountains, in New Hampshire, there is a considerable vein of lead ore, which appears to be accompanied with manganese.

The lead mines in Upper Louisiana have continued profitable for several years.* That called Burton's mine is thirty-eight miles to the west north west of St. Genevieve, where the mineral is supposed to extend over two thousand acres of land, and is of two kinds, gravel and fossil. "The gravel mineral is found immediately under the soil, intermixed with gravel, in pieces from one to fifty pounds weight of solid mineral. After passing through the gravel, which is commonly from three to four feet, is found a sand rock, which is easily broken up with a pick, and when exposed to the air, crumbles to a fine sand. This rock also continues five or six feet, and contains mineral nearly of the same quality as the gravel: but mineral of the first quality is found in a bed of red clay, under the sand rock, in pieces from ten to five hundred pounds weight, on the outside of which is a white, gold or silver coloured spar or fossil, of a bright glittering appearance, as solid as the mineral itself, and in weight as three to two; this being taken off, the mineral is solid, unconnected with any other substance, of a broad grain, and what mineralogists call potters' ore. When it is smelted in a common smelting furnace, it produces sixty per cent. and when again smelted in a slag furnace, produces fifteen per cent. more; making, cleanly smelted, seventy-five per cent. The gravel mineral is incrustated with a dead grey substance, the eighth of an inch in thickness; has small veins of sulphur through it, and will not produce more than sixty per cent. when cleanly smelted."

In other mines, situated about thirty miles to the south-west of St. Genevieve, the lead is found in regular veins, from two to four feet in thickness, containing about fifty ounces of silver in the ton; but at the depth of twenty-five feet, the operations are impeded by water; in short, the mineral tract is here very extensive and rich, and the present produce is computed at more than forty thousand dollars annually. Be-

* Message of the President, 1804, 8vo.

fore the cession of Louisiana, 1803, they had been worked by the French, MINERA-
LOGY. but in a negligent and inefficient manner.

In Virginia there are said to be lead mines which yield from fifty to eighty pounds from one hundred of ore. This metal is also said to occur in South Carolina.

But the substances which are the most precious to industry are iron and coal. In the district of Main the founderies are supplied with bog ore; and another kind is found in great abundance in Massachusetts, where there are considerable manufactures. There is one mine not far from Boston of which the ore has a vitreous appearance, and is slightly magnetic; I believe the new metal discovered by Mr. Hatchet, is a specimen from Massachusetts. There are also mines of iron in Rhode Island, the middle states, and South Carolina. Pennsylvania abounds with this metal.

"Iron ore, in immense quantities, is found in various parts of this state, (Massachusetts), particularly in the old colony of Plymouth, in the towns of Middleborough, Bridgewater, Taunton, Attleborough, Stoughton, and the towns in that neighbourhood, which have in consequence become the seat of the iron manufactures.* The slitting mills in this district, it is said, annually slit six hundred tons of iron; and one company has lately been formed, which will annually manufacture into nails, of a quality equal to those imported, five hundred tons of iron. The number of spikes and nails made in this state is supposed now to be twice as large as that made in 1788, and is still increasing, and will probably soon preclude all foreign importations, and, from the abundance of the raw material, may become an article of export."

The iron works on the river Patuxet, twelve miles from Providence, in Rhode Island, are supplied with ore from a bed four miles and a half distant, in a valley pervaded by a rivulet. A new channel has been formed for the water, and the pits are cleared by a steam engine. There are also many iron works in Maryland.†

Coal has been discovered in great abundance on both sides of James river, and is said to have been first observed by a boy in pursuit of gray fish. This valuable mineral also abounds towards the Mississippi

* Morfe, 325. ed. 1794. 4to.

† Ibid. 344.

and Ohio, that of Pittsburg being of a superior quality, but it is chiefly worked in Virginia, where the beds seem very extensive.* In the territory south of the Ohio, what is called stone coal is found in the Cumberland mountains.

Plumbago, commonly called black lead, aluminous slate, and asbestos, are said to be found in Massachusetts.

Zinc appears in Connecticut and New York; gypsum is not unknown in New York. Limestone is rare on the east of the Blue ridge; but there is a vein of marble which crosses James river, and a long bed of lime-stone passes through North Carolina, in a south westwardly direction.

Diamond Hill, in Rhode Island, so called from its sparkling appearance, contains a variety of singular stones, but their nature has not been described. Talc is found in pretty large plates in Pennsylvania and New York; and appears in New Hampshire, adhering to rocks of white or yellow quartz.† The largest leaves are found in a mountain about twenty miles to the east of Dartmouth college. The same author also informs us, that black lead is found in large quantities in the township of Jaffrey, in the southern part of the same state. Amethysts, or violet coloured crystals, are found in Virginia; and it is probable that the emerald mentioned by Mr. Jefferson was only a green crystal,

* In 1804 a coal mine was discovered on the river Juniata, twenty-five miles to the west of Huntingdon, Pennsylvania, and of course near the Apalachian mountains, which is now wrought with considerable advantage. The bed of coal is horizontal, and upwards of ten feet thick. The price at the mine is seven or eight cents per bushel, and there is an easy water carriage to Columbia. In Virginia a bed of coal, about twenty-four feet thick, has been found to rest on granite. Volney, 96.

The quantity of coal imported between the 1st of October 1800, and the 30th of September 1801, was,

In American bottoms,	-	-	-	363,148 bushels.
In foreign bottoms,	-	-	-	301,911

Total 665,059

Of this the quantity brought from Great Britain makes a large proportion of the whole, viz.

From England,	-	-	-	349,509 bushels
Scotland,	-	-	-	233,553
Ireland,	-	-	-	64,888

The remaining 17,109 come from the same countries, but by a circuitous route. At the rate then of 36 bushels to a chaldron, 28,473 chaldrons of British coal are annually consumed in the United States.

† Belknap, vol. iii. p. 193.

though

though emeralds be also said to exist near Philadelphia. The diamonds of South Carolina are probably mere crystals of quartz. Georgia, the most southern state before the acquisition of Louisiana, is of a rich soil; but besides a bank of oyster shells, ninety miles from the sea, there seems no mineralogic discovery.*

MINERALOGY.

White pipe clay, with yellow and red ochre, have been found at Martha's vineyard, in Massachusetts.

It is said that Louisiana contains some mines of lead and iron, and even some appearances of silver, towards the Rio Colorado, or red river. During the Mississippi scheme, the rich silver mines of St. Barbe were held out as an inducement, but no certain evidence of their existence appears. In the map of Louisiana, by De Lisle, they are placed on the western side of the river Magdalena, whose mouth is indicated in the chart of the gulph of Mexico, recently published by the Spanish government. †

There are several mineral waters, of various virtues, in different provinces of the United States, but none of distinguished eminence like Bath, or Aix-la-Chapelle. In the province of Vermont, or the Green Mountain, there is a remarkable sulphureous spring, which dries up in two or three years, and bursts out in another place. There are several mineral springs in Massachusetts, but little frequented, and there is another at Stafford, in Connecticut. Those of Saratoga, in the province of New York, are remarkably copious, and surrounded with singular petrifications. They are considerably frequented, as well as those of New Lebanon in the same country. New Jersey boasts of some chaly-

Mineral Waters.

* Oysters are however found in the rivers at a considerable distance from the sea, as appears from Mr. Weld and other authors.

† Near Franktown, in Pennsylvania, is found the sulphated ironian of Haily, crystallised in a fibrous mass of a celestial blue. In South Carolina, among the granitic mountains, is found the *epidote* of the same author, of a yellowish green; and in the county of Pendleton, the *titane oxide*, or the third variety of the adamantine spar of Kirwan. *Walckenaer*.

The mountains near the pleasant village of Esopus, or Kingston, on the western side of the Hudson river, are said to contain a great variety of ores and fossils, among which are native alum and galena. At Marble Town, in the neighbourhood, are quarries of a fine black marble, interspersed with shells. The mill-stones found near Esopus are used in many parts of the United States.

Fuller's earth is found at the Washington mines, in Newfield, state of Massachusetts, whence it is conveyed to many parts of the United States, as appears from advertisements in the American newspapers. Vegetable impressions are found in limestone, in a hill half a mile west of Esopus, New Hampshire. The strata are from ten to twelve inches thick, of a blueish grey.

MINERAL
WATERS.

beate waters; and near Isle Creek, in Pennsylvania, on the river Alleghany, or Ohio, there is a spring which yields petroleum, said to be useful in rheumatic complaints. Two warm springs occur in Virginia, one of them 112°. These are called the springs of Augusta; but others more frequented are near the river Patomak. A bituminous spring was discovered on the estate of General Washington, which easily takes fire, and continues burning for some time. The salt springs in Kentucky also deserve mention; and there are others in the province of Tennessee. In Georgia, near the town of Washington, there is a remarkable spring rising from a hollow tree, which is incrustated with matter probably calcareous.

Natural
Curiosities.

The natural curiosities of the United States are numerous, and have been investigated with that laudable attention, which has been particularly directed by the English towards such interesting appearances. Besides the irruption of the river Patomak through the Blue Mountains, and other objects already mentioned, the principal uncommon features of nature shall be briefly indicated from Dr. Morse's American Geography. In Vermont there is a remarkable impendent ledge of rocks, about two hundred feet high, on the west bank of the river Connecticut; and in the same province is a curious stalactitic cave, in which, after a descent of 104 feet, there opens a spacious room about 20 feet in breadth, and 100 in length, with a circular hall at the further end, at the bottom of which boils up a deep spring of clear water. Rattlesnake Hill, in New Hampshire, presents a stalactitic cave; and near Durham is a rock so poised on another, as to move with one finger; a natural remain of a ruined hill, though in England it would be called Druidical. The rivulet in Massachusetts, called Hudson's Brook, has excavated in a fantastic manner a large rock of white marble.* The falls of the river Powow, in the same province, are not only curious in themselves, but present many grotesque mills, and other monuments of industry; and a similar appearance occurs on the river Pautukit in Rhode Island. In Connecticut is a cave which was for some time the retreat of Whaley and Goffe, two of the Judges of Charles I.: and in the town of Pom-

* The small sandy desert, about five miles in length, near Race Point, which has overwhelmed a forest of trees, also deserves mention. Morse, p. 316.

fret is another, rendered remarkable by a humorous adventure of General Putnam.

NATURAL
CURIOSITIES

In the province of New York a rivulet runs under a hill about seventy yards in diameter, forming a beautiful arch in the rock; and there is a stalactitic cave, in which was found the petrified skeleton of a large snake. The falls of the Mohawk river, called Cohoz, are more remarkable for the width of the stream, than from the height of the descent. There is a beautiful cascade in Fayette county, Pennsylvania, over a semicircular rock of marble.⁷ In Pennsylvania there are also some remarkable caves, one of which resembles a church with pillars and monuments. In the territory on the N. W. of the Ohio, the savannas, or rich plains, extend for thirty or forty miles without any tree; they are crowded with deer, wild cattle, and turkeys, and often visited by bears and wolves; but this district is chiefly remarkable for a number of old forts, of an oblong form, with an adjoining tumulus, or tomb. As the Mexicans have a tradition that they passed from the north, these forts may perhaps be remains of their first residence, or of some nation which they subdued. In the western part of Maryland there are said to be some remarkable caves: and others occur in Virginia, particularly that called Madison's cave, on the N. W. side of the Blue ridge, extending about 300 feet into the solid limestone. The blowing cave emits a strong current of air, particularly in frosty weather. The natural bridge is a sublime and striking curiosity, being a rock covered with soil and trees, across a chasm, appearing to have been opened in the course of ages by a brook, which now runs between two and three hundred feet beneath. The breadth of this bridge is about sixty feet, and the thickness of the mass about forty.⁸ The rock is limestone, which easily wastes by the attrition of water, whence the number of caverns in that kind of rock, while in the granitic, or argillaceous, they rarely occur. In Kentucky the banks of the river

⁷ Inlay, 304.

⁸ In Mr. Weld's travels there is a print of this singular bridge, which is not only curious, but of great utility.

On the Chafalia, one of the mouths of the Mississippi, there is a natural floating bridge, or raft, many leagues in length, consisting of driven timber, and over which the cattle pass habitually. Ellicot, 125.

NATURAL
CURIOSITIES

so called, and of Dick's river, are sometimes four hundred feet in height of limestone, or white marble; and there are said to be caverns of some miles in length, thus rivalling the celebrated cave in Carinthia. The territory on the south of the Ohio (Tennessee) presents a remarkable ledge of rocks in the Cumberland mountains, about thirty miles in length, and two hundred feet thick, with a perpendicular face to the S. E. The *whirl* is more grand than the irruption of the Patomak through the Blue ridge: the Tennessee, which a few miles above is half a mile wide, contracts to one hundred yards, and forces its way through this outer ridge of the Apalachian, forming a whirlpool by striking against a large rock.* In Georgia the chief curiosity is a large bank of oyster shells, ninety miles from the sea, to which it runs nearly parallel: if the river Savannah never passed in that direction, it is probable that the land has gained so far on the ocean.†

Islands.

The chief islands belonging to the United States are Long Island, (the province called Rhode Island being continental, with two or three small islands attached;‡) and a few insular strips of land near the shores of North Carolina. The others, scattered along the coast, and in the various bays and lakes, are of little consequence.

* On the river Tennessee is a whirlpool, called the Sucking Pot, which draws into its vortex trunks of trees, or boats, and throws them out half a mile below. Jefferson's Notes on Virginia, Philadelphia, 1801. 8vo. p. 19. In the same work, p. 31, there is a representation of Madison's cave, on the north of the Blue ridge, in Virginia.

The stream called the Roaring river, in Tennessee, is very picturesque, many rivulets falling into it from high rocks, in beautiful cascades. Mich. 251.

Basalt, in columns, appears in the Conewago hills, Pennsylvania.

Mr. Ellicott, p. 21, mentions the great cave on the west bank of the Ohio, between the rivers Wabash and Cumberland, as a singular natural curiosity, but he gives no description.

† So late as the year 1771 there was an excellent harbour, which might receive one hundred ships in a good depth of water, at Cape Lookout, North Carolina. It is now entirely filled up, and is solid ground; Morfe, 139: but it is to be wished that he had more enlarged upon so incredible a circumstance.

‡ Rhode Island, which gives name to the state, is about thirteen miles in length, by four in breadth, with a considerable town called Newport; and, before the war, was a beautiful and highly cultivated district.

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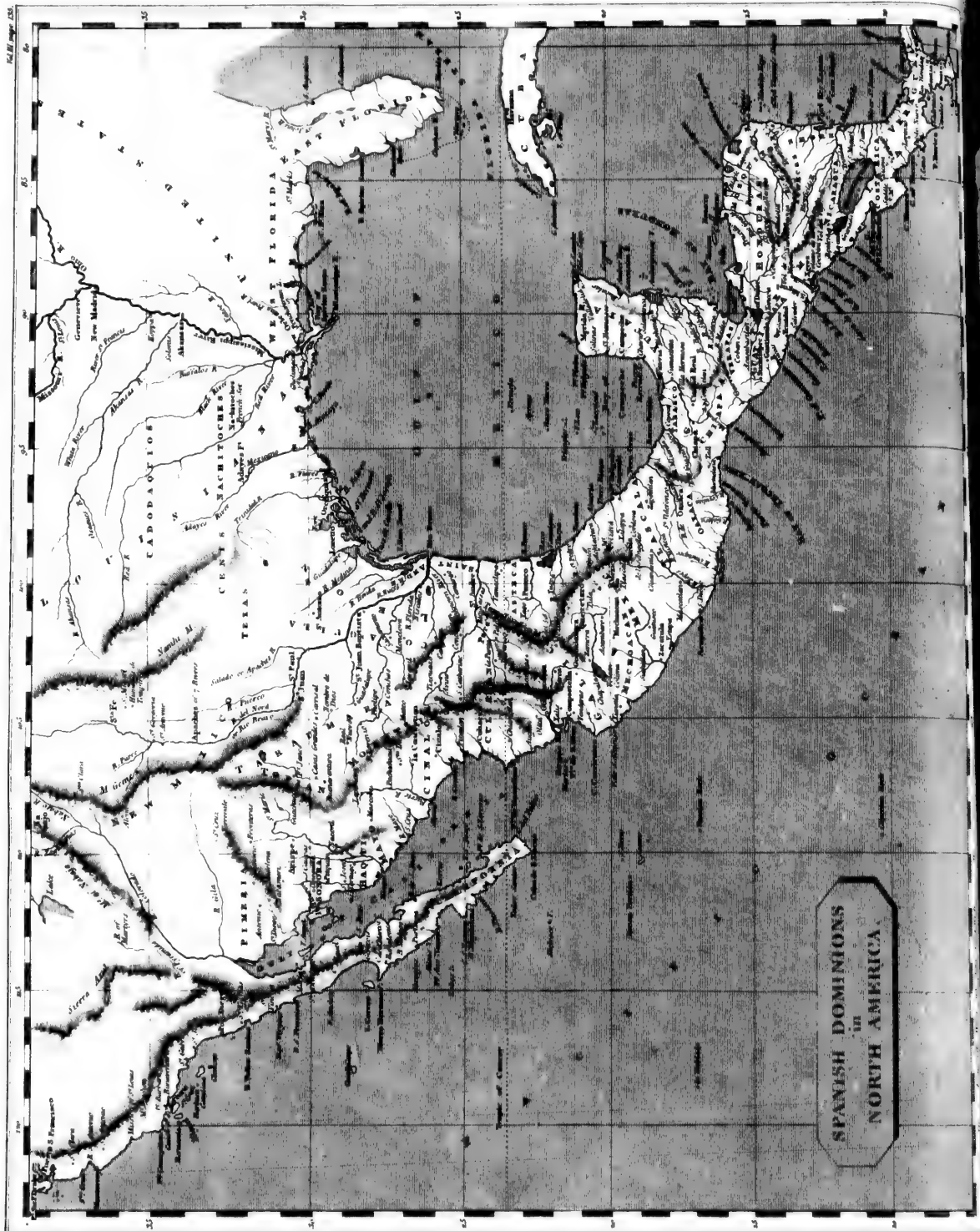
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THE
SPANISH DOMINIONS
IN
NORTH AMERICA.

CHAPTER I.

HISTORICAL GEOGRAPHY.

Boundaries.—Original Population.—Historical Epochs.—Antiquities.

CONCERNING the Spanish possessions in South America, considerable information may be derived from the travels and essays of Don Antonio de Ulloa, the writings of Bouguer and Condamine the French mathematicians, and more recently from two Germans, Dobrizhoffer and Helms. But whether from a greater jealousy of possessions adjoining to those of the English, their most dreaded enemies, or from a combination of this and other causes, any recent and precise intelligence respecting their dominions in North America rarely appears. The visionary ideas of the Abbé Clavigero, who has pretended to build a Mexican history upon paintings and symbols of most doubtful interpretation, have enfeebled the credit to be lent to other parts of his tedious production; and even recent writers concerning Mexico * have been

* The true pronunciation is Mehico, from the peculiar sound of the Spanish x,

forced

forced to borrow from Gage, and other authors of the seventeenth century. Amidst such a deplorable penury of materials, recourse must unavoidably be had to authorities which might in any other case be esteemed imperfect, dubious, or antiquated. Yet the Spanish dominions in North America are more important, in every respect, than those which they hold in the southern half of the new continent.

Anxious to remove this reproach from geography, the author, during his late residence in France, used assiduous attention to procure recent materials for the account of the Spanish settlements in North America, and is at length enabled to present such a description, from documents little known in England. The best part of the work called *El Viagero Universal*, or the Universal Traveller, is the account of New Spain, which occupies the greater part of two volumes, printed at Madrid in 1799. Though the plan be singularly confused, the materials are often excellent, and will form the chief basis of this account, with some additional illustrations from the journey of M. Thierry de Menonville to Oaxaca in 1777; from the dictionary of Alcedo, Madrid, 1786; from the papers of M. Humboldt, the author having conversed with that eminent traveller at Paris; and from various casual information.*

* The *Viagero* was begun in 1795, and completed about 1802, in more than forty volumes 8vo. The first five volumes are a mere translation of *Le Voyageur François*, by Laporte; but finding that work antiquated and superficial, the author abandoned it, and drew up his account from recent travellers; yet it is in the bad form of an imaginary voyage, in letters addressed to a lady, the author, Estalla, generally speaking in the first person, and rarely naming his authorities. The only volumes worthy the attention of the intelligent reader are xx, xxi, xxii, xxiii; and above all, xxvi and xxvii, which contain the account of New Spain.

M. Thierry was a planter of St. Domingo, who travelled in disguise in order to bring the cochineal plant. His book, which is singularly rare, was printed at Cape François, in St. Domingo, 1787, 2 vols. 8vo. under the title of *Traité de la Culture du Nopal, &c. précédé d'un Voyage a Guanaxaca (Oaxaca)*. The dictionary of Alcedo was printed at Madrid, 1786, in ten parts, forming five volumes in small 4to. As he has transcribed all the useful articles in the *Teatro Americano*, by Don Joseph de Villafenor y Sanchez, printed at Mexico in 1746, two thin volumes folio, he has superseeded the use of that work, which is chiefly filled with ecclesiastical information. Useful hints may also be found in the book called *CARTA de la America Septentrional, desde su extremo N. hasta 10° lat. Con un ANALYSIS, en que se manifiestan los fundamentos sobre que se ha construido. Por D. Isidoro de ANILLON, catedrático de astronomía, geografía, cronología, é historia, del Real Seminario de Nobles de Madrid, y academico supernumerario de la Real Academia de la Historia. Para uso del mismo Seminario. Madrid en la imprenta real, año de 1803, small 4to.*

As these dominions form perhaps the richest colony in the world, are attended with many singular and peculiar circumstances, deeply interesting to every inquisitive reader, and have hitherto remained one of the most obscure parts of geography, they shall be treated at rather an unusual length, which it is hoped will be readily excused, on account of the novelty and importance of the information to be conveyed. It must also be added, that for ample accounts of other countries the reader can be referred to books in various languages; but here, as the materials are Spanish, little understood and very difficult to procure, the author will be excused for presenting a full and independent description.

In estimating the extent of these large and flourishing possessions, it will be necessary, in the first place, to consider the boundaries. That towards the S. E. is decidedly the eastern boundary of Veragua, the last province of North America; consisting, according to Lopez, of a ridge as already mentioned, called Sierras de Canatagua. Towards the north the Spaniards do not readily assent to a boundary, but in fact claim the whole north-west of America, pretending a prior right of discovery to the English, or any other nation, and appoint a governor of New California, by which name they imply all the N. W. coast of America.¹ Within land the boundaries of Louisiana, formerly possessed by Spain, ascended, even by the English maps, to the Turtle Lake, one of the sources of the Mississippi; but since that province has been acquired by the United States, the limits of the Spanish possessions must be sought on the western coast, where the English especially claim the port of Sir Francis Drake, and mark the Spanish boundary at Fort St. Francisco, to the north of the town of Monterey. But Cape Mendocino was the boundary fixed by the last treaty. Upon the whole, the sources of the Rio Bravo may be assumed as a medial boundary, as there are several small Spanish settlements to the north of Santa Fe, that is about lat. $39^{\circ} 30'$, while the southern boundary is about lat. $7^{\circ} 30'$: hence a length of thirty-two degrees, or 1920 g. miles. But the breadth little corresponds to this prodigious length of territory: though in one place, from the Atlantic shore of East Florida to those of California on the Pacific, it

Boundaries.

¹ See La Perouse, vol. ii. ch. 11, 12.

BOUNDARIES amounts to about three quarters of that length ; but the narrowest part of the isthmus in Veragua is not above twenty-five B. miles : in general the medial breadth can scarcely be computed at more than 400 g. miles.

The Spanish dominions in North America are, as Antillon * observes, immense in their extent ; while scarce even a village appears from the tropic towards the north, or in what he calls the interior provinces. There are only a few garrisons, most of them in ruins ; † nor is there any hope that these provinces can contribute to the prosperity of the parent country. On all sides, says he, there are mountains and barrenness, without any product except the mines, which however so much abound in Sonora, New Mexico, New Biscay, and New Leon, that they rival those of the southern provinces. He proceeds to observe, that the names of pretended kingdoms of Leon, Santander, &c. produce false ideas with respect to countries, which in fact are mere deserts, without a foot of real and secure territory ; while the pretended possession costs the royal treasury not less than one million two hundred thousand *pesos* or dollars annually. ‡

Divisions.

The admission of chorography into universal geography must be reprobated, as heterogeneous and foreign to the nature and grandeur of a description of the whole world. Hence a chorographical description of a country, or that which presents an account of each province, or even state, however excellent in a detached work, has never been admitted into the present plan. But the divisions and boundaries of the Spanish provinces in North America have been so little illustrated, that modern writers, even of great celebrity, have fallen into several mistakes ; and as it is the peculiar duty of a geographical work to obviate such misapprehensions, some details on this subject become unavoidable.

The Spanish dominions in North America are divided into seven grand territories, or domains, often called kingdoms by the Spanish

* Carta de la America Sept. y Analisis. Madrid, 1803, 4to. p. 41, 45.

† Among others, Terrenate and St. Saba are demolished. Ib. 45.

‡ It must not be forgotten, that the map of the Gulf of Mexico, published by the Spanish government, and re-engraved in France, has some gross errors. The N. W. and S. W. corners have been extended too far to the *west* by about sixty three miles, according to Mr. Arrowsmith, while the middle of that western coast is tolerably exact.

authors.

authors.* These are, in ascending from the south to the north, DIVISIONS.

1. Guatemala. 2. Mexico, a name not restricted to the ancient kingdom, but embracing many extensive provinces to the north. 3. New Biscay. 4. New Leon. 5. New Mexico. 6. California. 7. Florida.

I. DOMAIN OF GUATEMALA.

This territory contains the following provinces:—

1. *Veragua*. This district, though geographically within the bounds of North America, as admitted by all the Spanish authors, yet politically forms a part of the government of *Tierra Firme*, in South America. It is very mountainous, and unhealthy on account of the perpetual rains. It was discovered by Colon, on his fourth voyage, 1503, and granted to him and his heirs by the Spanish monarch. There are rich mines; and the capital is a small town of the same name, but often called *St. Yago*, as being under the protection of that saint.¹

2. *Costa Rica*, though mountainous, produces excellent cacao or chocolate. The name was derived from the rich mines; one at *Tisingal* having been reputed another *Potosi*.²

3. *Nicaragua* is one of the most woody provinces of New Spain, but the plains are very fertile; and the natives are accounted singularly ingenious, especially as musicians and goldsmiths.

4. *Honduras*, a province well known to the English reader, as productive of excellent mahogany, and other valuable woods.

5. *Xeres*, or *Gboluteca*, a small district.

6. *Tiguesgalpa*,

7. *St. Miguel*, other minute divisions.

8. *St. Salvador* is another small province, producing sugar and indigo.

9. *Sonfonate*.

* The divisions are still arbitrary and indistinct. D'Anville has admitted into his map a grand division, called *New Navarre*, unknown in the map of *Alzate* (which also omits *Guatemala*, as no part of Mexico); nor is *New Navarre* known to the Spanish authors.

¹ Alcedo *in voce*.

² Viagero, xxvii. 178.

DIVISIONS.

10. *Suchitepec*.11. *Soconusco*.

These seven last districts form what is called the province of Guatemala in the common maps.

12. *Icalcos*. Of this province, mentioned by Estalla, I can find no account; nor is it mentioned in the description of the boundaries of the other provinces. Perhaps it may be that of *Hicacas*, in Faden's map of the Mosquito shore, 1787, on the north of Honduras.

13. *Vera-Paz*, a mountainous district, full of woods, where the rains are said to continue during nine months of the year.

14. *Chiapa*, a province fertile in maize.

15. *Yucatan*, a large desert, but productive of excellent woods.

II. DOMAIN OF MEXICO.*

In this division may be arranged:—

1. *Tabasco*, a fertile province, especially in chocolate, in which it was accustomed to pay its tribute to the ancient kings of Mexico.

2. *Oaxaca*, or in the old maps *Guanaca*, remarkable for the rich product of cochineal.

3. *Tlascala*. The capital of this province was the noted republic. The climate and soil are excellent, and the agriculture considerable. A high range of mountains passes through it, called the chain of Tlascala, and covered with perpetual snow, the tropical rains being here unknown.

4. *Mexico* proper, a celebrated region.

5. *Zacatula*, small, but fertile.

6. *Mechoacan*, a large district, with many lakes, fertile in maize, fruits, and cotton; the air being at the same time singularly healthy.

To which may be added,

7. *Panuco*, called *Guateca* by D' Anville. It is bounded on the north by the new kingdom of Leon, and is rather barren in that quarter; but on the south, where it borders on Mexico proper, is not only fertile,

* The ancient kingdom extended from near the lake of Chapala in the north, to Chiapa, on the river Tabasco, in the south.

but

but has mines of gold.* In Arrowsmith's map, and in that of Alzate, DIVISIONS. which is ecclesiastical, this province is supplanted by that of *Santander*, Panuco, the capital, being placed in the province of Mexico. This is however a very small district.

8. *New Galicia*, called a kingdom by some Spanish authors, but it is in fact a mere province, also known by the name of *Xalisco*. It is rather woody and mountainous; but the plains are very fertile, and produce most of the European fruits. There are also mines of silver. *Zacatecas*, a very rich mining country, is regarded as a district of New Galicia.

9. *Nayarit*, a small province, encircled with high mountains of what the Spaniards call *Sierra Madre*, or the Mother Chain. This district, though rich in mines, escaped unknown until the year 1718. The natives had retained the ancient Mexican idolatry, but at their own request were supplied with missionaries.

III. DOMAIN OF NEW BISCAY.

To this kingdom Alcedo positively ascribes the following provinces: Tepeguana, Tarmaura, Batopilas, Sinaloa, Culiacan, Ostimuri, Sonora, Pimeria higher and lower; he also adds Chiametlan. Beginning therefore from the south, according to the order here pursued,

1. *Chiametlan*. 2. *Tepeguana*, on the river Nazas. And, 3. *Batopilas*, are districts of what is called New Biscay in the maps; while

4. *Tarmaura* forms a large province in the N. E. part of New Biscay, bounded on the west by Sonora, on the east by New Mexico, the limit being the Rio Bravo. On the south-west it borders on Cinaloa. Alcedo computes the extent at one hundred Spanish leagues * from E. to W. and as much from N. to S. This vast province, discovered in 1614, derives its name from a savage nation there found, who were of pacific dispositions. The *Pueblos*, villages, or stations of the missionaries, who are Franciscans, are enumerated by Alcedo, and amount to

* Alcedo in error.

• The Spanish league is equal to four English miles, as Dutens found in measuring one in the neighbourhood of Madrid. See his Itinerary. But the Spanish American league is smaller.

DIVISIONS. forty-eight, exclusive of the capital St. Felipe de Chiguagua. It is chiefly rich in mines, the minerals being smelted at the Real, or royal station, of St. Eulalia, perhaps that styled the Real Nuevo in the maps, in N. lat. $29^{\circ} 36'$. The name of *Apacheria*, applied to the northern part of this province by D' Anville, seems to have been invented by that geographer, as the appellation is not admitted by the Spanish writers. The omission of this important province in all the maps is a lamentable proof of the deficiencies in Mexican geography; and it is to be regretted that the Spanish monarch has not ordered a map to be engraved equal at least to that of South America by La Cruz.*

The other provinces are more distinctly known, as they lye in the following order on the Gulph of California:

5. *Culiacan*, extending sixty leagues by fifty. The capital is of the same name, situated on a rivulet which runs into the river Umayá, also called the river of Culiacan.

6. *Cinaloa*, or *Sinaloa*. This province is bounded on the east by the high ridges of Topia, running from the city of Guadalajara in the S. to New Mexico N. but totally unconnected with the Andes of South America. There are many mines of silver, which are not wrought for the want of workmen; the province being moreover subject to sudden floods, by the torrents from the mountains.†

7. *Ostimuri*, which being situated on the river Mayo, was formerly known by the latter name. The river Hiaqui, by its inundations, contributes to the fertility of the country; and though there be mines, they are little wrought, because the gold and silver are much mingled with baser metals.

8. *Sonora*. This important province is divided from Cinaloa by the great river Hiaqui, from upper Pimeria by the river Gila, according to Alcedo.‡ On the east it borders on Tarmaura; its extent on the Gulf of California being more than a hundred Spanish leagues, or about four

* The geography of the northern provinces is still so obscure, that it may be compared with that of interior Africa. Antillon, Carta, p. 45.

† Estalla, whose plan is extremely confused, gives some account of the northern provinces in his description of California, vol. xxvi. p. 8, &c. The river Cannas divides New Galicia from Cinaloa. Near the river Mayo are the mines de los Frayles.

‡ See also his art. *Gila*; *Estalla*, &c.

hundred English miles. It is not only very fertile in maize, grapes, and other fruits, but has many rich mines, which are however little wrought, on account of the expence. In this province is the noted plain of Cineguilla, so abundant in native gold.

9. *Pimeria* was so called from the Pimas, a savage tribe. It is divided into two districts, the higher and the lower, and extends more than a hundred leagues to the north of Sonora. The savages are here rather pacific, and friends of the Spaniards. The climate is moist and cold, the rains being sometimes continual during a whole week in winter, while many torrents descend from the Sierra Madre. The Spaniards have left this province almost a desert, on account of the frequent invasions of the Apaches.

IV. DOMAIN OF NEW LEON.

The name of New Leon is restricted by the maps to a small province around the town of Monterey, which must not be confounded with another of the same name to the north of California. But amid the uncertainty of confused descriptions, it would be preferable to extend this appellation over the north-eastern settlements, and include the following provinces:—

1. *New Leon* proper. This district, ridiculously called a kingdom, is divided from Guadalcazar on the S. by the desert of Jaumave, and mountains of Tamalipa. It is itself very mountainous, produces little except lead, and is very thinly peopled.

2. *Santander*, a far more important province, extending on both sides the mouth of the great river Bravo: it abounds in grains and fruits of various kinds, with numerous flocks of cattle; nor are mines wanting, especially of silver, in the Sierra Gorda, a considerable chain of mountains in the S. which has sometimes given name to the province. It was only subdued, and the capital of the same name founded, in 1748. There is said to be an excellent harbour, discovered in 1739, which might, in case of invasion, prove fatal to Mexico.

3. *Coaguila*, or New Extremadura. Alcedo extends the bounds of this province to the river Medina, and computes the extent at two hundred leagues from N. to S. and a hundred and sixty from S. W. to N. E. The capital

DIVISIONS. capital is Monclova, in lat. $27^{\circ} 30'$; but the province is scarcely peopled, except by some missions.

To the north-east of this province Alzate has placed that of *Texas*, which he extends to the river beyond the settlement of Adaes; but his geography is so confused, that he would thus restrict Louisiana to the east side of the Mississippi, while in fact the French, who first discovered and possessed Louisiana, extended that name as far as the Rio Bravo, as appears from the map of Depratz. The village of Ceniz, or Texas, giving name to the province, is by Alcedo himself positively placed in Louisiana; and in his description of Louisiana, he says that it borders on the east with Florida, Georgia, and Carolina, and on the west with New Mexico; thus precisely according with the French acceptance. He adds, that the breadth from east to west is about eleven degrees. The mission of Texas, which gives name to this province, was originally a mere religious station, established by the Spaniards, with the special permission of the French, for the conversion of the savages; and the Rio Bravo would in fact form the most convenient limit for the Spaniards in this quarter, while by extending their territory they will actually weaken their population and means of defence.

V. DOMAIN OF NEW MEXICO.

This division, though styled a kingdom by the Spanish writers, only contains one province; and though the limits be ridiculously extended by Alcedo, who thus attempts to connect it with other Spanish settlements, it is so detached and surrounded by savage tribes, that it must be considered apart. It was discovered by a missionary in 1581, but was scarcely subdued until 1644; nor were many missions established until after the year 1660, while the capital, Santa Fe, was only founded in 1682. It is a very fertile and delightful province, producing maize, wheat, and excellent fruits. The mines are said to be all of tin; and the animals and plants are of singular variety. In the map of Alzate, the northern limit is marked at 38° , and the southern $30^{\circ} 30'$; the medial breadth, on both sides of the Rio Bravo, being only two degrees, or 120 g. miles.

VI. Do-

VI. DOMAIN OF CALIFORNIA.

1. *Old California*, a well known peninsula, of which a description shall be afterwards given.

2. *New California*, a term recently applied by the Spaniards to the whole north-west of America, as was first known by the voyage of La Perouse. But this new province, of which the capital is Monterey, will scarcely be admitted by the English, the Americans, nor the Russians, to pass the port of Sir Francis Drake.

VII. DOMAIN OF FLORIDA.

1. *East Florida*. 2. *West Florida*. The cession of Louisiana to the United States rendering these provinces a detached possession, in the immediate vicinity of a powerful country, it is probable that they will be transferred to the United States, to whose commerce they will prove a valuable accession, on account of their sea ports and extent of coast.

Another division is that of AUDIENCES, or supreme courts of justice, of which there are three; that of Guatemala; that of Mexico; and that of Guadalaxara. This last extends over the whole northern provinces; and it is remarkable, that the bishopric of Durango, in the most southern part of New Biscay, likewise extends over all these provinces: proofs that their settlement is very imperfect, and chiefly maintained by missions or religious stations, one bishopric and one tribunal here extending over a vast empire.

The original population of these extensive regions was various, consisting of Mexicans, and other tribes; considerably civilized in the centre, while to the north and south were savage races. The origin of the Mexicans remains in great obscurity, after the fruitless researches of many ingenious and learned men. Their language appears to be totally different from that of the Peruvians; but the Mexican vocabularies are

Original
Population.

* The U. S. claim West Florida as having been a part of Louisiana before the English possession. The claim is geographically just.

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POPULA-
TION.

very imperfect. There seems not however to be any resemblance between either of these languages, and that of the Malays, who peopled the numerous islands in the Pacific Ocean; nor are the Tatarian, or Mandshur features to be traced in any account of the Mexicans or Peruvians, though singularly distinct from those of other races.* The animals of America are mostly distinct from those of the old continent; and could in no case have descended from them. If it cannot be allowed that the great Creator, in like manner, ordained a distinct race of men for this continent, it will be necessary, before this curious question be determined, to collect vocabularies of the African languages, as there are on that continent several nations of a copper colour, resembling the Americans; and the Mexicans and Peruvians might become more civilized, from mere advantages of situation and accident. It is however deeply to be regretted that these American empires, or kingdoms, were destroyed; as, not to mention the cause of humanity, they would have afforded curious objects for philosophic observers of human nature. The general opinion seems to be, that the Mexicans and Peruvians were a distinct race from the other Americans; and amidst a variety of conjectures it might be enquired if they did not proceed from Japan, or be haply of the same race with the people of the large island of Tchoka, or Sagalian, whose features, as described and delineated by La Perouse, and the literary men who accompanied him, bear no resemblance to the Tataric. In this case we may conceive that they are remains of a people in eastern Asia, who were expelled by the Mandshurs, on their progress from more western settlements.*

* See the table of Languages in Dr. Forster's observations on his voyage to the South Sea. In his history of voyages in the North, p. 43, he supposes that these kingdoms were founded in the thirteenth century, by the troops contained in some of the ships sent by Kublai Khan from China, to subdue Japan; that great fleet having been scattered, and supposed to have been lost in a severe tempest. Careri has published a curious Mexican drawing of the progress of the colony.

* The honest missionary Dobrizhoffer, after residing twenty-two years in America, and a formal examination of this question, declares that he cannot trace any resemblance of the Americans, or their language, in any other part of the globe; and that he should incline to believe, were it not from the apprehensions of ridicule, that they have dropped from another planet. There seems a shadow of resemblance between some of the Mexican words published by Dr. Forster, and the Tchoka published by La Perouse, as *tehe*, three, is in Mexican *jei*, &c. This origin will singularly coincide with the Mexican traditions.

The historical epochs of Mexico have been of little moment since it was conquered by the Spaniards in 1521, when the last monarch Guatimozin perished, Motezuma having died in the preceding year. According to the Mexican traditions their ancestors consisted of several savage tribes, who about the tenth or eleventh century of the Christian æra moved in successive migrations from unknown regions towards the north and north-west, and settled in Anahuac. About the beginning of the thirteenth century a tribe, more polished than the rest, advanced from the borders of the Californian gulf, and took possession of the plains adjacent to the great lake near the centre of the country. They were for a time governed by chiefs or judges, till the territories becoming more extensive, the supreme authority centered at last in a single person. Even from the most extensive accounts the monarchical government had not lasted above 197 years; that is, it commenced about A. D. 1324, the first monarch being Acamapitzin.* Wars and rebellions, famines and inundations, constitute the chief features of Mexican history; and the Spanish government presents few events of moment, the natives being confined between the two seas, and more easily checked than in South America, where there is a wide extent of territory for retreat and conspiracy.

As the names and succession of the Mexican monarchs may interest many readers, and late Spanish writers seem to have treated this subject with considerable accuracy, and to have removed several received errors, they shall be subjoined from the most recent accounts.*

1. *Acamapitzli* was elected when the Mexicans established themselves in the lake. He reigned twenty-one years with despotic authority, though he was tributary to a neighbouring sovereign.

2. *Huitzicubuitl*, son of the former; yet not succeeding by hereditary right, he was elected by the chief men of the kingdom: reigned twenty-two years.

3. *Chimalpopoca*, brother of the former.

* Robertson's America, v. iii. p. 156.

* For some account of these monarchs, and those of the neighbouring tribes, the reader may consult Clavigero.

* Viagero, xxvi. 237.

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4. *Izcobuatl*, son of the first king by a slave, ruled with supreme prudence, and was the most fortunate of the Mexican monarchs, subduing many neighbouring provinces. He erected two famous temples; one to the idol called the Woman Snake, and the other, which was highly celebrated, to *Huitzilopochtli*, the chief of the Mexican divinities.

5. *Moctecubzuma*, or *Moteczuma I.** was general of the army, when he was chosen Monarch on account of his merits and valour. He conquered several neighbouring provinces, or rather villages and districts. In the ninth year of his reign the capital was inundated by the lake, and this event was followed by a severe famine. He reigned twenty-nine years.

6. *Axayacatl* was also general when he was elected, though the early Spanish writers have supposed that he was the son of his predecessor.

7. *Tizoc* was brother of the former, but was general when chosen sovereign, the one office being regarded as a step to the other. The petty wars of these princes are void of all interest; and the Mexican monarchy was far from boasting the extent of the Peruvian. He was poisoned in the fourth year of his reign.

8. *Abuizotl*, brother of the former, and also commander in chief of the army. At the dedication of a temple he is said, most magnificently, to have sacrificed seventy-two thousand prisoners. He obstinately persisted in conducting a rivulet to Mexico, though it occasioned an inundation, as had been predicted. Yet he was regarded as the greatest of the Mexican kings, and extended the monarchy to the confines of Guatemala. During his reign was discovered the quarry of the stone called *tezontli*, with which the chief edifices in the city were constructed. He reigned eighteen years.

9. *Moctecubzuma*, or *Moteczuma II.*, the ninth in the series of kings, and not the eleventh, as Solis pretends, was the son of the sixth monarch, and nephew of the two last. He was elected on account of his great reputation, though high priest in one of the temples. With the exception of the war against the republic of Tlascala, in which he was unsuccessful,

* This name has been corrupted, even by celebrated English writers, to Montezuma, as if it were Spanish or Italian, while other nations observe the orthography.

he subdued several provinces, and is said to have extended the kingdom to the bounds of Nicaragua. He was in the eighteenth year of his reign when he was attacked by the Spaniards. According to their writers his education, as a priest of sanguinary idols, led him to the utmost cruelty, luxury, and pride. He changed the constitution of the state, depriving the plebeians of all employments, and ordaining death against any of them who should dare to look him in the face. Even the nobles were reduced to slavery, though loaded with idle titles. Ambassadors were ordered to approach in mean dresses, and to speak in a low voice, while his only answer was *Ha*; "it is well." Such was his luxury, that he every day changed his cloaths and utensils, while the women in his Harem exceeded two thousand five hundred, and his noble attendants three thousand; but they were exempted from taxes, while the people paid, some of them, one third of their property. The letters of Cortez, the conqueror of Mexico, present singular details, and proclaim the luxury of Motezuma.

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10. *Guillabuatzin*, or *Guatimozin*, as he is more commonly called, was brother of Motezuma, and was elected during the war with the Spaniards. He was taken prisoner, and strangled by order of Cortez, because he had planned a revolt, after having sworn homage to the Emperor Charles V. then king of Spain.

The extensive peninsula of California was discovered by Cortez in 1536, but was so completely neglected, that in most charts it was represented as an island.* The jesuits afterwards explored this province, and acquired a dominion there as complete as in Paraguay. On their expulsion in 1766 it was thought to be a not unfertile region, with some mines of gold and a valuable pearl fishery. The countries of Cinaloa and Sonora, on the east side of the Vermillion sea or gulf of California, as well as the immense provinces of New Biscay, and others on the N. E. never were subject to the Mexican sceptre, but now acknowledge the power of Spain though the settlers be few.* In 1765 a war broke out with the savages, which ended in their submission 1771. During their

* Robertson's America, iii. 228.

* New Mexico was discovered in 1553 by Antonio d'Epéjo. Gage, p. 55, mentions a city of that name as lately built.

marches

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marches the Spaniards discovered at Cineguilla, in the province of Sonora, a plain of fourteen leagues in extent, in which vast quantities of gold were found in large lumps, at the depth of only sixteen inches. Before the end of the year 1771 above two thousand persons were settled at Cineguilla; and other mines, not inferior in wealth, have been discovered in other parts of Sonora and Cinaloa. It is probable that these discoveries have instigated other settlements in the northern parts of New Spain, and in New Mexico. These colonizations, and the settlement of Santa Fe, and others in that vicinity, are important events in the history of the Spanish territories. It is however to be lamented that the progress of these settlements has not been explained with more care and accuracy, for no small obscurity attends their chronology.

The history of the Floridas is sufficiently known. After having been contested between the French and Spaniards, they were yielded to the English by the peace of 1763; but being regained by the Spaniards during the American war, they were finally assigned to that nation by the treaty of 1783.

Antiquities.

The ancient monuments of the Mexicans seem chiefly to consist of a few symbolical paintings, the colours of which are remarkably bright, but the designs rude. Some of their utensils and ornaments have also been preserved, but are coarse and uncouth. Their edifices appear to have been little superior, being meanly built with turf and stone, and thatched with reeds. The great temple of Mexico was a square mound of earth, only ninety feet wide, partly faced with stone; with a quadrangle of thirty feet at the top, on which was a shrine of the deity, probably of wood. In spite of the enthusiastic suggestions of Clavigero, such a temple would make a mean figure, if placed by the side of the Peguan Shomadoo, erected at a barbarous and early epoch of the Peguese, who are not even now esteemed to be highly civilized. The most remarkable monument still remaining is thought to be the aqueduct of Chempoallan—but the architect was a Franciscan missionary!¹⁰ Our fanciful author proceeds to prove, from tribute rolls, that the Mexicans used lime; but the best proof would have been a few solid walls. As the first Spanish conquerors, in the true spirit of Mendez de Pinto, de-

¹⁰ Clavigero, i. 420.

scribed every trifling object in the wildest colours of hyperbole, so the warm imagination of Clavigero creates wonders for its own admiration, while in truth the Mexicans appear to have little exceeded the inhabitants of Easter Island in any of the arts.*

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The uncertainty of the Mexican antiquities has been treated in so lively a manner by Estalla, that the reader will not be displeased to see some of his observations."

"While I was searching in modern Mexico for monuments of the grandeur of the ancient, so much vaunted by our historians, and not finding one trace of what they have painted, I communicated my doubts to Don Luis de Trespalacios, adjutant-major of the provincial regiment of that capital, who knowing the purity of my intentions, with the greatest generosity offered to serve me as guide; and to his friendship I owe all that I shall tell you concerning Mexico.† He laughed at my exaggerations, and answered in a jeering manner, time must be very voracious in America, since not being able, in a long series of ages, to destroy the monuments of the Egyptians, Greeks, and Romans, here in a very few years he has devoured monuments and edifices, which rivalled or exceeded those of the ancient world. But let us leave exaggerations, and speak seriously. There are in Mexico no remains of what our historians have painted: with the pardon of these respectable men, I do not believe one half of what they boast. Those great palaces, gardens, and temples; those immense and populous cities subject to Mexico, and whose kings were tributary to Motezuma; that high and vast wall which divided the Mexican empire from the republic of Tlascala; and the other wonders related by historians, should have left at least some few ruins in testimony of their existence, even granting that the Spaniards entertained the extravagant wish of destroying all, in order that they might be obliged to construct, with great labour and expence, other edifices far inferior.

* Careri, vi. 204, briefly describes the *cones*, or pyramids, near Teoti Guacan, called those of the sun and moon: but his account is brief and unsatisfactory, and drawings are wanted. In the square of Otumba is a pyramid, or rather obelisk, of one stone; but the height is not mentioned, nor the antiquity. Estalla, xxvii. 57.

† Viagero, xxvi. 308.

† It must be remembered that the work is in the form of letters to a lady.

" Must

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" Must we not think in the same manner of the relations concerning the manner and delicacy with which the Mexicans worked gold and other metals? What is become of all those precious toys? They were embarked on board a ship, it is said, and were lost. A wonderful empire, which lost in a small vessel all its precious manufactures of gold! It is certain that not a particle remains of these wonders. Let us suppose in the Spaniards an unnecessary brutality; let us grant to the fanatic Las Casas that the conquerors, in three or four years, devoured fifty millions of Indians; shall we also imagine that they destroyed the cities and magnificent edifices, which their own interest and convenience must have led them to preserve? Shall we suppose they did it with a design of not leaving to the Indians any monument which might remind them of their former power? Absurd supposition! The Indians had no occasion for any monument of art to remind them that they had emperors, that they were conquered by the Spaniards, who thus became their lawful lords, against whom they neither can nor ought to revolt; and if there was any necessity not to revive the memory of those transactions, it would be absurd, on an annual solemnity, to display in triumph the standard of Cortez, in commemoration of this famous conquest.

" I am far from believing the absurd calculations of Las Casas, and those who imitate his extravagance. It appears to me the most evident of human affairs, that, in all the empire of Mexico, the population did not surpass three or four millions, even including the people of Tlascala, and other towns not subject to Motezuma. But are we then to suppose that a Cortez, a Diaz, and other eye witnesses of credit, repeated falsehoods with regard to the grandeur of Mexico? Not positively; I would reserve the term of falsehoods for those relations of historians or travellers, who only study to divert the reader with marvellous accounts of non-existencies, or idle exaggerations. I believe a Cortez, a Diaz, and other witnesses of the conquest, to have been men of a very different character, who were naturally surprised at the grandeur of Mexico, from a comparison with what they had hitherto found in the isles, and on the continent of America; and who, never conversant in works of art, and then a long time estranged from them, were surprised at the rudest exertions of this description. For a long time they had seen nothing, except the

the hovels of savages, the rudest furniture, and naked tribes, without any policy or regular form of government. In New Spain were found numerous villages of neater and more regular houses, and the city of Mexico appearing very populous, a powerful chief, some policy, some buildings of great extent, and various objects of art, which they fondly compared with the best productions of Europe.* All these objects they encountered in a country, whose inhabitants they had previously held in the meanest estimation; and dazzled with such unexpected wealth in gold, silver, and precious stones, their inflamed imagination led them to extravagant descriptions. Thus, in modern times, the enchanted islands of Juan Fernandez, of Tinian, of Orahiti, painted by voyagers as so many paradises of delight, what are they? Cool judgment would say, —little isles, more or less agreeable. But shall we say that these respectable voyagers have told falsehoods? No. They arrived fatigued with the uniform and melancholy spectacle, which a tempestuous sea had presented during many months of navigation, wearied beyond expression, sick, deprived almost of the necessaries of life: the most rocky and desert island would, in their eyes, have assumed the charms of paradise. But happily finding an island covered with verdant trees, with fruits, with salutary plants, diversified with crystalline rivulets, possessed by humane and beneficent inhabitants, eager to relieve their numerous wants, shall it be thought strange that no expressions could equal their feelings, in describing these countries; though there were in fact nothing which they themselves would not have despised in other circumstances. From these examples may be seen the real cause of the exaggerations of our historians and conquerors; and if to this be added the self-interest which they had to magnify the grandeur of their conquests, there is little room to be surprised at their relations.

“ Equally absurd and fabulous is the numerous population ascribed to ancient America by Las Casas, who, by his insane ambition and fanaticism, has impressed an indelible stain upon the Spanish name, calumniating the conquerors with the blackest and most horrible impostures. This hypocrite, who pretended so much love of humanity, was the very man who began the slave trade; by whose fatal councils the unhappy

* Or rather of Spain, where the arts were not very brilliant at that period.

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negroes were torn from their country to perish in America. Atrocious advice! accursed adviser! whose name ought to be execrated by all real lovers of humanity, as having caused the destruction of five millions of negroes. How could he pretend love to the Indians, who was so cruel to the negroes? A wild ambition, a ferocious spleen, on feeling the complete disappointment of his inordinate expectations, were the causes that inflamed his anger against the Spaniards, and stimulated him to so many calumnies and impostures. Whoever examines with impartiality the historians, on the contrary will clearly perceive, that New Spain is much more populous at present than in the time of Motezuma, though Mexico, and the other large towns, might even then have appeared magnificent, when compared with what had previously been discovered. It may even be affirmed, on the most secure foundations, that there are at present more Indians in the kingdom of Mexico, than existed at the time of the conquest; for the *cuentas*, or registers of the Indians, which are renewed every five years, serve to demonstrate that there is always an increase, and never a diminution: if by chance there be fewer families of Indians, it is because they are mingled and confounded with the Spaniards, for many daughters of Cacics have married Europeans; and among the ancestors of the present Spaniards were many of that description: and it is certain, that though women passed from Spain to marry the conquerors, yet finding them lame and wounded, they despised such husbands, and refused the proposed alliances; whence the men, enraged at their squeamishness, repaid them with equal contempt, and wedded the most considerable among the Indian females. It is true that no Indians remain in the Spanish West India islands; but the people there called *Jibaros*, what are they but Indians mingled with the Spanish race? They have no connection, in colour nor form, with the negroes, nor the mulattoes. When I say that there is a considerable augmentation apparent from the registers of the Indians, I do not mean that the account shall be taken for any particular year, in which there may have been a contagious disorder, or even for any particular space of five years; not forgetting, however, that these registers always fall short of the truth, there being many causes why the Indians should wish to escape mention in these records; but that a judgment be formed from a fair and progressive examination."

The chief remaining antiquities of the Mexicans appear to be earthen ware, in which the Indians of Guadalaxara and Mechoacan excel to this day, as the Tarascas of the Peribanes in that of japanning, the black colour lasting as long as the wood itself, while the figures equal those of the Chinese artists, and the gilding in gold and silver is of great lustre and permanency.*

ANTIQUITIES.

* Viagero, xxvi, 233. Humboldt shewed at Paris a bust which he had acquired in Mexico, of which the head dress rudely resembled the ancient Egyptian. He had also a pamphlet, lately printed at Mexico, on some antiquities recently discovered. Yet I have seen nothing to indicate that the people of Mexico excelled in ingenuity those of the South Sea, except in some advantages of situation, particularly in the abundance of gold and silver.

CHAPTER II.

POLITICAL GEOGRAPHY.

Religion. — Government. — Population. — Army. — Navy. — Revenue. — Political Importance.

RELIGION.

THE religion of the Spanish settlers in these provinces is well known to be the Roman Catholic, and of such a sort as greatly to impede industry or prosperity, for it is computed that one fifth part of the Spaniards consists of ecclesiastics, monks, and nuns; and that country must be miserably defective in which the jesuits were of distinguished industry. The establishment of the inquisition, and the strange fanaticism of the Spaniards, who disgrace the European name, have not only crushed all spirit of exertion, but have prevented the admixture of other Europeans, whose industry might improve their settlements, and whose courage might defend them.

The religion of the ancient Mexicans appears to have been chiefly founded on fear, the temples being decorated with the figures of destructive animals: and fasts, penances, voluntary wounds, and tortures, formed the essence of their rites. Human sacrifices were deemed the most acceptable; and every captive taken in war was cruelly tortured and sacrificed. The heart and head were the portion of the gods, while the body was resigned to the captor, who, with his friends, feasted upon it. The extinction of such a ferocious people may not be worthy of much regret: but modern philosophy is apt to decide on a slight and imperfect view.

Thus, instead of a benevolent deity, the worship of the Mexicans may be said to have been directed to the evil principle of some oriental nations, whom all their efforts were stretched to appease. In the Mexican language *Teotl* was a general term for any divinity; and in obscure theory

theory they believed in a creator whom they styled *Ipalnemoani*, that is, RELIGION.
 " he by whom we live:" but their supreme deity was rather that evil spirit called *Klaccatecolotl*, or the *rational owl*, whose delight was to injure and terrify. They believed in the immortality of the soul, and a kind of transmigration; the good being transformed into birds, and the bad into creeping animals. The principal deities were thirteen in number, among whom were the sun and moon; and Tlaloc, the god of water, was the master of paradise; but Mexitli, the god of war, received the chief adoration. There were other gods of the mountains, of commerce, &c. and the idols, rudely formed of clay, wood, or stone, sometimes decorated with gems and gold, were numerous. One was composed of certain seeds, pasted together with human blood. The priests wore a black cotton mantle, like a veil; and there seem to have been orders of monks, as among the eastern nations of Asia. The austerities and voluntary wounds of the priests, their poisonous ointments, and other abominable rites, even as related by Clavigero,* evince that the entire system was the most execrable that has ever appeared on the face of the earth, alike blasphemous to God and pernicious to man. The whole is so totally unlike any system ever practised in any part of Asia, that there is additional cause to believe that the people were either indigenal, or have proceeded from Africa, in which alone (as among the *Giagas*) such cruelties may be traced. The Asiatic religions seem universally mild, and even gay, as natural in the worship of a being who is benevolence itself; while in Africa the preponderance of the evil spirit seems to have been acknowledged by many nations. Certainly the Spaniards never sacrificed more victims than the Mexicans themselves devoted; and the clamours of pretended philosophy will often be found in opposition to the real cause of humanity, which it aspires to defend. Could a change of manners have been effected without the use of the sword, it would have been highly desirable; but the design might have been as fruitless as a sermon to a tiger or a rattlesnake. The cruelties of the Spaniards must, by candour, be partly imputed to the profusion of torture and human blood which every where met their eyes in this unhappy country;

* See, i. 125, a father invited to the sacrifice of his daughter; and, 237, the human victims sacrificed at the consecration of two temples were twelve thousand two hundred and ten!

RELIGION. as such scenes change the very nature of man, and influence him like the carnage of a battle.

Numerous bishoprics and archbishoprics have been instituted by the Spaniards throughout their American possessions; but the ecclesiastic geography, if even accurately arranged from the latest information, would little interest the general reader. The prelates are nominated by the king; and the decorations of the churches are excessive.

The archbishopric of Mexico is extremely opulent, but still esteemed inferior to the bishopric of Puebla de los Angeles. The ecclesiastical courts are numerous; and the Holy Tribunal of the faith, or in other words the inquisition, is extremely vigilant and severe.* The chapter of the cathedral comprehends twenty-six ecclesiastics. While the revenue of the archbishop is computed at one hundred thousand dollars; the dean has more than ten thousand; the canons from seven to nine thousand; the lesser canons from two to four thousand. All the curates are named by the viceroy, from a list of three proposed by the bishop, but the first is always preferred. Some curacies are worth many thousand ducats; and one in the archbishopric of Mexico is valued at fourteen thousand ducats a year; while many of the curates run a career of ambition, and become prebendaries and bishops. Formerly the religious orders held many curacies; but at present they are chiefly bestowed on secular priests.†

There are two archbishoprics, those of Mexico and Guatemala, with eight bishops, Puebla de los Angeles, Oaxaca, Durango, Mechoacan, Antequera, Guadalaxara, Yucatan, and Chiapa. The curacies are computed at two hundred and thirty-five, which may be regarded as a proof of very thin population, the parishes in the little kingdom of Portugal being computed at four thousand.

Government. The ancient government of Mexico was an hereditary monarchy, tempered however by a kind of election not unknown in the barbarous ages of Europe, by which a brother or nephew of the late king was preferred to his sons. Despotism seems to have begun with the celebrated Motezuma. There were several royal councils, and classes of nobility, mostly hereditary. The nobles were styled *pilli* or *tlatoani*; but

* Estalla, xxvi. 282.

† Alcedo, art. *Nueva Espana*.

the Spaniards introduced the general term of *casik*, which Clavigero says signifies a prince in the language of Hispaniola; but is by some asserted to imply a priest among the Mahometan Malays. Land was not supposed to belong to the monarch, but was alienable by the proprietors. As writing was unknown there was no code of laws, but Clavigero has preserved some traditions on the subject. Their armour and tactics appear to have been extremely rude.

GOVERN-
MENT.

It is supposed that the Mexican empire commenced about the christian year 1320. The sovereigns seem to have been chosen indifferently from the royal family. The political system was feudal, there being thirty families which composed the first class in the state, and each of them had many thousand vassals. In the second class there were about three thousand families; the vassals being in fact slaves, while the lords had the power of life and death.

The laws were very severe; and numerous crimes were capital. As in Japan, the sons of the great were, during their absence, retained as hostages at the court.

Each province was subject to a tribute, excepting certain nobles, who were obliged to take the field with a certain number of vassals, the chief characteristic of the ancient feudal system in Europe.

The viceroyalty of Mexico may be regarded as the chief in Spanish America, and is extended over a territory equal to an European empire. But there are several inferior governors, named by the Spanish sovereign. The large domain of Guatemala is ruled by a president, who is also captain-general, or commander of the troops. Some provinces of New Biscay also form a separate presidency: but the northern provinces being chiefly held by religious settlements, the civil authority is less considered than the ecclesiastic. A lieutenant-governor of the two Californias presides at Monterey. The government of Florida is of small importance.

No small part of the viceroy's power consists in the patronage of all the churches. His salary was formerly forty thousand ducats, afterwards sixty thousand, and lastly eighty-four thousand, exclusive of the disposal of lucrative offices, monopolies, connivances, presents, &c. which sometimes arise to an enormous amount. His court is formed on the

* Edalla, xxvi. 283.

GOVERN-
MENT.

regal model, with horse and foot guards, a grand household, and numerous attendants. The series and history of the viceroys may be found in the work of Alcedo.¹⁰

There are three grand tribunals, called Royal Audiences, that of Guatemala, that of Mexico, and that of Guadalajara. The Oidor, or chief judge, is an officer of great importance. There are also several inferior tribunals, among which that of the Acordada judges small causes without expence, and with great promptitude. The greater *alcaldias*, or bailwicks, in New Spain are computed by Alcedo at one hundred and twenty-eight; those of Guatemala at twenty-five: but he does not specify those of the third audience. Thiery has described the justice of the little country Alcalds from his own personal experience.

Population.

The population of all the Spanish provinces in North America has been estimated at little more than seven millions; of whom the natives, called Indians, are supposed to amount to four millions; and the Spaniards and inhabitants of mixed races are computed at three millions, of which the Spaniards may constitute one third. This calculation is however considered as liberal, while it is probable that the whole population of Spanish North America does not exceed six millions; nay, as will afterwards appear, it is far less.* The small-pox is remarkably fatal; and the black vomit, already mentioned as allied to the yellow fever of the United States, acts at intervals with the ravages of a pestilence. The number of priests, monks, and nuns is also injurious to population; which, however, appears upon the whole to have greatly increased. In 1612 the inhabitants of Mexico were computed at 15,000; they are now 140,000.†

The population of America, before the European conquest, appears to have been greatly exaggerated, as usual in every case of the like nature; and from rough calculations, offered even by classical authors, perhaps four-fifths may be always deducted. That this is the case at least with the discoverers of new countries, may be judged from our

¹⁰ Art. *Nueva Espana*.

* From the recent travels of Helms, it appears that the population in Mexico is far superior to that of Peru.

† Careri in 1697 computed them at 100,000.

own enlightened times, in which the English voyagers to Otaheite supposed the inhabitants to exceed one hundred thousand, when, upon actual enumeration, there were found little more than sixteen thousand. It is probable that when America was discovered, the whole population, including the West Indies, did not exceed four millions. Besides the usual mistakes, there was an additional source of exaggeration, as the Spanish conquerors, like knights-errant, counted hundreds by thousands; and the oriental vein of hyperbole, introduced by the Moors, has tainted the early Spanish authors. If we allow that a hundred or two of Europeans could subvert a mighty American empire, we must imagine that its armies were small, as well as cowardly and unskilful.

Estalla has justly observed, that even the benevolent settlements of Penn have greatly diminished the number of natives in their vicinity; and he proceeds to explain the causes of this decline, though not in strict accordance with his former arguments above recited, in which he attempts to deny that any diminution exists." He says that one of the chief causes why the population has not augmented in a greater degree, is the little care formerly taken to avoid epidemical disorders; while latterly effectual progress has been made in this benevolent purpose. The cleansing of the streets, the evacuation of standing waters, an exact police, the neatness of the inside of the houses, personal cleanliness, and many other causes which contribute to health, have attracted the attention of the latter viceroys; and it is to be hoped that all the causes of pestilential diseases will in time be remedied.

It is well known that the small-pox is extremely fatal to the natives of America, on account of the thickness of their skins, which prevents the passage of the noxious matter. This malady appears at considerable intervals of time; and on its last appearance so great attention was paid to the sick, that there perished not one-fourth part of the usual number. The charity of the Spanish Mexicans spared no effort; and so great were the contributions, that seventy thousand dollars remained after all the necessities of the sick had been abundantly supplied.

The same author observes, "that though he has not been able to acquire exact information concerning the population of New Spain, yet, by the

" Viagero, xxvii. 196.

POPULATION most intelligent computations, there are in the Intendancy of Mexico one million two hundred thousand souls, including one hundred and forty thousand for the city. And by the proportion between this province and the others, as well as by the best founded calculations, it may be supposed that there are, in all the kingdom, three millions and a half of inhabitants." ¹³

M. Thierry, from the information of a well informed officer in the Spanish government at Vera Cruz, says, that from Panama to California and Sonora on the one side, and from Carthagená to the Mississippi on the other, including a surface of more than two millions of square leagues, the actual enumerations did not present one million of souls, comprising not only all the Spaniards, but the Indians, mingled races, and negroes." This would be truly surprising, as the population of the Spanish dominions in North America is understood to be far greater in proportion than of those in the southern part of that continent. But upon the whole there is reason to believe, after the perhaps partial estimation of Estalla, compared with the surprising diminution assigned by M. Thierry, that the whole population of the Spanish possessions in North America can in no case exceed three millions.

Army.

The minute account of the Mexican forces, published by Estalla, is a truly singular document; and it may be doubted whether the publication was strictly consistent with the maxims of political prudence. But as it is not a little curious in many points of view, it shall be laid before the reader with most of its details."

" There are in Mexico many troops of infantry and cavalry, and likewise horse and foot militia, which are upon the footing of the regular infantry, being provided with veteran serjeants-major, adjutants, and lieutenants from the army, their pay being continued. These officers, who come regularly from Spain, are employed in the military instruction of the troops. The military state of Mexico is as follows :

" A company of halbardiers of the viceroy's guard, created in 1568, livery blue and crimson, with silver buttons, the officers wearing epauletts. This company consists of a captain, lieutenant, three corporals, and twenty halbardiers.

¹³ Viagero, xxvii. 19.

¹⁴ Thierry, i. 195.

¹⁵ Viagero, xxvi. 320.

" The

" The regiment of infantry of the crown consists of two battalions, ARMY. each of seven companies; total force nine hundred and seventy-nine. Created 1740; uniform blue and white.

" The regiment of New Spain, raised in 1788, same strength as the former; uniform white and green.

" Regiment of Mexico, same number, and raised in the same year; uniform white and crimson.

" Regiment of Puebla, same number, raised in 1789; uniform white and purple.

" A battalion fixed at Vera Cruz, consisting of five companies, total force five hundred and two; created in 1793; uniform blue and crimson.

" The royal body of artillery, as ancient as that of Spain, contains three companies, each of one hundred and twenty-five men.

" The royal body of engineers consists of eight officers and a commandant.

" Two companies of volunteers of Catalonia, eighty men in each, date from 1762; uniform blue and yellow.

" The fixed company of Acapulco consists of seventy-seven, raised in 1773; uniform blue and crimson.

" The company of the garrison of the island Carmen, one hundred men, created in 1773; uniform blue and crimson.

" The company of San Blas, one hundred and fifty, appointed 1788; uniform blue and yellow.

" There are two veteran regiments of dragoons; that of Spain, consisting of four squadrons, and its force amounting to four hundred and sixty-one, dates from 1764; uniform blue and crimson. That of Mexico, equal to the former, was appointed in 1765.

" The company of dragoons of the garrison of Carmen consists of forty-three, created in 1773; uniform blue and crimson.

" There are seven regiments of provincial infantry, or militia; each regiment consisting of two battalions; each battalion of five companies, including that of grenadiers. The total force of each regiment is eight hundred and twenty-five, in the time of peace, and one thousand three hundred and fifty during war; uniform blue, white, and crimson.

ARMY.

There are moreover three battalions of Guanajuato, Oaxaca, and Guadalupe, each consisting of five companies, including the grenadiers; the force of each battalion during peace is four hundred and twelve, and in war six hundred and seventy-five. There are companies called the grey and the purple of Vera Cruz, created in 1760, each of one hundred and nineteen. There have also been formed from the empire in general two distinguished bodies of volunteer *chasseurs* and grenadiers, each to be composed of one thousand one hundred and thirty-nine, whether in peace or war.

" Moreover, there are seven regiments of provincial militia, horse and dragoons. Each regiment is composed of four squadrons, the total being three hundred and sixty-one in the time of peace, and six hundred and seventeen during war.

" The corps of spearmen of Vera Cruz was created in 1767, is composed of six squadrons; total force three hundred and eighty-four.

" In the province of Valladolid of Mechoacan is about to be formed a regiment of dragoons, of the same force as those above mentioned, (about four hundred and sixty). There are also forming, in the interior, companies of light militia, in support of the veteran bodies during peace, and to augment, in case of war, these veterans and the militia.

" On the frontiers there are several bodies of cavalry, which, to avoid prolixity, I shall not enumerate; but the total amount is eight thousand three hundred and ten.

" There is not a richer regiment in the world than that styled of the Mexican Trade, the soldiers being possessed of many millions of dollars. For it must be known, that all the shopkeepers, and men employed in the warehouses and counting-houses of Mexico, are soldiers. This regiment consists of ten companies, the total force being seven hundred and two; and it dates from 1693, but received new regulations in 1793. In time of war this regiment performs service within the city on its own charges, and has the privileges of the militia; uniform blue, white, and crimson. This regiment was founded on account of a tumult in Mexico, appeased by the Marquis Altamira, at the head of sixty friends and dependants; he was afterwards colonel of this regiment, styled the Mexican Trade.

" The

" The battalion of the commerce of Puebla consists of four companies; ARMY. total force two hundred and twenty-eight; was appointed in 1739, and regulated in 1739; uniform the same as the last.

" The squadron of Mexican cavalry is in three companies, regulated in 1787; total force one hundred and twenty-nine.

" There is also a corps of invalids, created in 1774, and consisting of three companies, without any determined number.

" I leave apart the bodies of troops which are in various garrisons, and in the internal provinces of this great viceroyalty, but may mention, that the garrison companies and light troops which guard the provinces, are a veteran cavalry armed with firelocks, pistols, lances, bucklers, and buff coats. The total force is three thousand and ninety-nine. The provincial troops consist of fourteen squadrons, in forty-eight companies, amounting in all to two thousand five hundred and eighty-seven. Over and above all this force, a great deal is derived, in cases of necessity, from the friendly nations of Indians."

Hence it would appear, so far as a calculation can be made where the numbers are not always given, and those omitted being supposed three thousand, that the troops in New Spain are as follow :

Regulars	-	-	5,982
Militia, &c.	-	-	31,523
Garrisons, &c.	-	-	5,686
Total			<u>43,191</u>

This is certainly a considerable force; but the local services of the garrisons can scarcely be dispensed with; and those of thirty thousand Spanish militia, at a time when even the armies of that country are little celebrated, may be supposed only formidable to savages. The chief reliance would of course be placed in the regulars, who by all accounts are very ill armed and accoutred. And after this solemn enumeration, it may well be doubted whether the whole grand viceroyalty of New Spain could send into the field fifteen thousand effective men. This province seems not however to share the domestic discontents which have appeared in some of the others, having been generally favoured by the

ARMY.

the Spanish monarchs, who justly regard it as the richest jewel in their crown.

Revenue.

The Spanish armies in America must however depend, in a great measure, upon the supplies sent from the parent country: the navy is also that of the parent country; but there are many guard ships, and commercial vessels, solely appropriated to the American colonies.* The revenue which Mexico yields to the Spanish crown, has been shewn by Dr. Robertson to amount to above a million sterling, but there are great expences. By the most recent account, the total revenue derived by Spain from America and the Philippines, is 2,700,000*l.* of which one half must be deducted for the extravagant charges of administration. It has been asserted, that the king's fifth of the mines of New Spain only was two millions sterling, which would swell the annual produce of the Mexican mines to ten millions. Dr. Robertson shews, from Campomanes, that the whole produce of the American mines is 7,425,000*l.* of which the king's fifth, if regularly paid, would be 1,485,000*l.* and it is probable that the mines of New Spain or Mexico, prior to the opulent discoveries in the north-west provinces, did not yield above one half of the whole amount.

The recent observations of Estalla on the revenues of New Spain deserve transcription, on account of the importance of the subject. They are not only little known, but contain much useful information on several subjects, so that their length may readily be pardoned."

"The augmentation which has taken place in all the branches of the royal treasury, in this viceroyalty, would appear incredible, were it not proved by authentic documents. For since the visit of Don Joseph de Galvez, afterwards Marquis of Sonora, the sums paid into the royal treasury have been tripled, so as to amount annually to nineteen millions of dollars, and latterly even that sum has been increased. I do not doubt that the expences of administration, salaries, &c. amount to four millions eight hundred thousand dollars, yet there is still an overplus of

* Four corvettes of twelve guns, and one goletta, are stationed at Monterey, to supply the presidencies of North California with necessaries. These vessels performed the Spanish expeditions to the north west coast of America. La Perouse, ii. 207.

¹⁵ Viagero, xxvii. 217.

fourteen millions, two hundred thousand dollars;* that is, more than REVENUE. one million, eight hundred thousand pounds sterling.

" If all this sum were remitted to the parent country, the riches of this viceroyalty would redound more to her advantage; but the assignments on the Windward Islands, the Philippines, Louisiana, Florida, and Truxillo, consume three millions, four hundred thousand dollars. What is remitted to Spain in money, and copper for the foundery of artillery; for quicksilver from Castille and Germany; in the produce of vacant bishoprics, and for cards and tobacco, amounts to four millions, eight hundred thousand dollars.

" The augmentation of the receipts is also visible in every article.

In 1789	they were	19,044,000 <i>pesos</i> .
1790	—————	19,400,000
1791	—————	19,236,000
1792	—————	19,521,698

" These products, compared with the four years which preceded them, clearly mark the augmentation.

For in 1785	the royal revenues were	18,770,000
1786	—————	16,826,000
1787	—————	17,938,000
1788	—————	18,573,000

" These revenues precisely increase according to the progress of agriculture, the mines, commerce, industry, and population.

" There are some branches of the revenue which attract superior attention, on account of their amount, though they be the most modern in the establishment, and that in other respects they might be regarded as of an inferior class. Such are the tributes, the products of the coinage, of quicksilver, gunpowder, cards, duties on goods sold, the drink

* The *peso fuerte* of Spain, called *piastre forte*, is worth from five francs to five francs eight sous, or about 4s. 6d. but that of commerce is ideal, and is only worth three livres five sous of France, equal to thirty-two and a half pence sterling. Sixty-four *pesos duros*, or *fuertes*, just equal 85 *pesos de cambio*. As the latter are chiefly used in commerce and accounts, it is to be supposed they are here intended: but see a passage in the article *pesos*, which indicates that Estilla uses the hard dollar. Even Dr. Robertson's calculations, in his History of America, are subject to this difficulty. Bourgoing infers all the colonial accounts to be in hard dollars.

Revenue. called *pulque*, bulls of indulgence, tobacco, lotteries, letters, all which are under the management of the minister of state. Other branches are administered in what are called the royal coffers, by their respective superintendants; such as the duties on gold, silver plate, the assays, tythes, ninth, various ecclesiastic concessions, titles of Castille, vendible offices, compositions and confirmations of lands, cock-fighting, snow and ice, stamps, fines, &c. the product of the mines, copper, lead, tin, alum, and others.

“ Other branches are particular to the coffers of Vera Cruz; as customs, freight, convoy money, &c.

“ The branch of tributes is one of the most ancient, as having been established immediately upon the conquest; with this difference, that at first it was rendered in effects, as the Indians paid it in their pagan times; but in 1561 it was ordered to be according to the value of the manufactures and products of the soil. In 1569 there were already established one hundred and five greater *alcaldias*, or bailiwicks, in which the greater part of the tribute was reduced to money; a practice gradually established throughout the viceroyalty, so that at present the tribute is paid at a fixed proportion of the manufactures and products of the soil. In this, however, there is the inconvenience of inequality: for example, in the district of Guanajuato, only twelve reals are paid yearly, while in that of San Luis Potosi the rate is eighteen reals; because the mines of the former augment in value, while those of the latter decline. The registers of the Indians are made by intendants, or commissaries, who present them to fixed offices for their revision and approbation, and that the exemptions may be notified. On the other hand, the Indians are free from the duties on things sold; and in every other respect they have more privileges than the Spaniards.

“ The duties on coinage have latterly augmented, as has been already mentioned, and may produce annually to the royal treasury one million seven hundred thousand *pesos*; that is, one million six hundred and fifty thousand for silver, and fifty thousand for gold, which is in small quantity. The salaries amount to one hundred thousand, the expences of the mint to three hundred thousand, which being deducted, leave a clear sum of one million three hundred thousand *pesos*. A marc of silver is

bought for eight *pesos* two *maravedis*, and is sold to the public at eight *pesos* four reals; this difference forming the advantage derived by the royal treasury." REVENUE.

A considerable revenue also arises from the sale of quicksilver to the mines; but our author's discussions on this branch rather belong to the mineralogy.

"The revenue from salt works is administered separately, that article being also of great use in the fusion of metals. The clear and whole result is one hundred thousand *pesos*.

"Gunpowder is of no less utility than salt in the mines; and such a quantity is made in the viceroyalty, as not only to suffice for home consumption, but also for the Spanish West Indies; producing to the king an annual sum of two hundred thousand *pesos*. The fine sort is sold at ten reals the pound, the common at eight reals; but a deduction of two reals is made to the proprietors of mines, for their encouragement. The quality is excellent.

"The duty on cards belongs to the same office as that of gunpowder, and clears annually seventy thousand *pesos*, after deducting fifty thousand of salaries and expences: each pack is sold at a *peso fuerte*, or hard dollar, so that the packs consumed are one hundred and twenty thousand.*

"The duties on articles sold is, after that on tobacco, one of the most productive, and does not fall short of the yearly sum of three millions four hundred thousand *pesos*; of which the salaries deduct three hundred and twenty thousand, and the expences eighty thousand. That which is called the sea duty, exacted at Vera Cruz, whether the articles be sold there or not, is of three per cent. on the supposed value, while, in the interior, it is six per cent. In some custom houses of the interior, and frontiers of inimical savages, only two per cent. is exacted, and sometimes even less.

"The tax on the drink called *pulque* belongs to the same office as the last, and the use of that liquor is so universal, as to amount to four millions of *arrobas* † yearly, at a very low price, three quartillos being sold

* So our author; and to judge from this passage his computations must be in *pesos fuertes*. The difference, which is very great, ought always to be marked by Spanish and other authors.

† The *aroba* is about twelve English quarts, or three gallons.

REVENUE.

in the city of Mexico for half a real, and in the country it is still cheaper. Each *arroba* brought into the capital pays a duty of one real 91 *granos*; in Puebla 1 r. 9 *granos*; and in other parts of the viceroyalty the Spaniards pay a quarter of the value, and the Indians a sixth. This revenue amounts annually to eight hundred thousand pesos; salaries thirty thousand, expences twenty thousand; clear sum seven hundred and fifty thousand.

" The duty on tobacco, though of more modern date, and in the form of a monopoly, is of all others the most useful to the royal treasury. The offices are in the towns of Cordova, Orizava, Zongolica, and Huatusco. It is bought by the king at a medial price of three reals a pound in the leaf, and is sold for ten reals. In order to encrease the revenue there is also a monopoly of cigars, the fabrics being established at Mexico, Puebla, Oaxaca, Orizava, Queretaro, and Guadalajara, which manufacture varies in quantities, according to the demand. The snuff called rappee was made in Mexico, but the consumption did not pay the expence. The sale of snuff, which comes entirely from Havanna, amounts to fifty thousand pesos; that in rolls three hundred and fifty thousand; the *puros* five hundred thousand; and the cigars, of which the consumption is infinitely greater, five millions four hundred thousand. Total sum six millions three hundred thousand. Last year, 1797, the augmentation of this revenue was eight hundred thousand pesos. Snuff is sold at twenty reals a pound; the *puros* from five to fourteen for half a real, according to size; and at the same price the packets of cigars, each containing three dozen and a half. The expences attending on this revenue are about two millions eight hundred thousand; the salaries being seven hundred thousand, general expences two hundred and fifty thousand, purchases seven hundred and fifty thousand, fabrics one million one hundred thousand. The clear revenue is therefore three millions five hundred thousand pesos. In the capital alone there are more than seven thousand persons employed in making cigars, formerly a tumultuous class, but now as peaceable as the other inhabitants, in consequence of the vigilance, good policy, and firmness of the government.

" Each shop for eatables, or other commodities, pays thirty pesos a year. Gross amount one hundred and ten thousand pesos; and, after deducting

deducting four thousand four hundred, there remain one hundred and five thousand six hundred. REVENUE.

" One of the easiest revenues in collection is that of papal bulls, which any who choose to amuse themselves with little sins may procure at the treasury of the Crusade in Mexico; but in the country they are sold with snuff. Their value is regulated according to the faculties, character, and dignity of the purchaser, from two reals to ten *pesos*. This commodious branch yields three hundred thousand dollars, from which must be deducted twelve thousand for salaries, and eight thousand for expences; so that there remain to his Catholic Majesty, for the pious designs of this establishment, that is, war against the infidels, two hundred and eighty thousand *pesos*.

" The revenue from the lottery is one of those which has prospered the most, and though more subject to variation than any other, may be rated at the clear sum of one hundred thousand *pesos*.

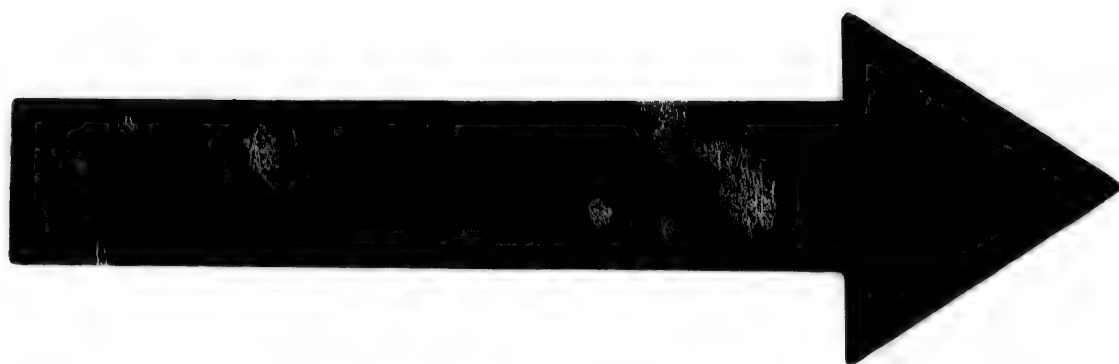
" Among the taxes gathered at particular offices must also be placed that of the post, which belongs to the minister of state, each courier being supposed to convey the quantity of thirty thousand *pesos*, more or less. This revenue has also the singularity of liquidating its accounts, not in *pesos fuertes*, like the others, but in reals of silver.* The clear product is supposed to be more than one million four hundred thousand reals.

" In 1791, the salaries being encreased, and the number of places augmented, arrangements were also made for more speedy correspondence. In 1792, a second post was established for each week, in the principal routes of Vera Cruz, *Tierra adentro*,† and Valladolid, so as not only to facilitate commerce, but to expedite the orders of government. The administration of the post of Vera Cruz is absolutely independent of the capital, and remits its revenue direct to Havanna by the packet.

" Hitherto I have treated of those branches of the revenue which are gathered at particular offices, I have now to mention those under the care of the ministers of the royal coffers.

* From this passage it would appear that the other calculations are in hard dollars, if Estalla have not changed them for *pesos de cambio*, or *corrientes*.

† That is inland; but the expression is provincial, and probably means to Oaxaca, &c.



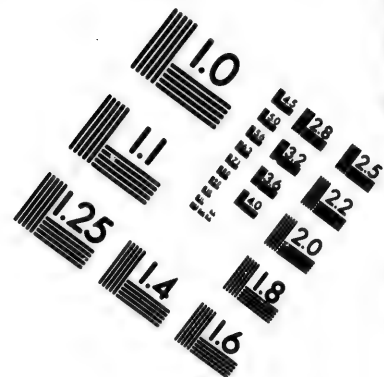
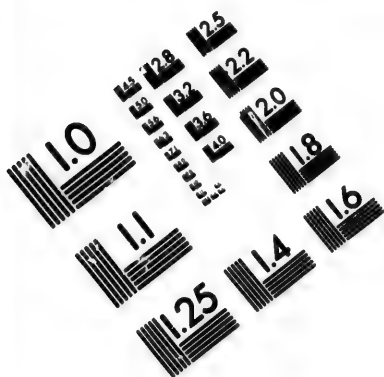
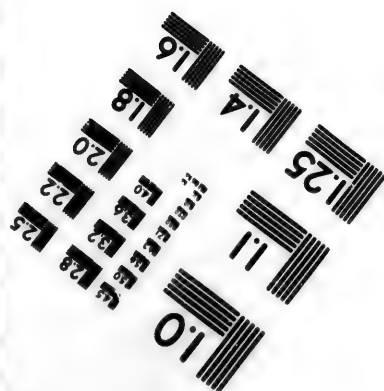
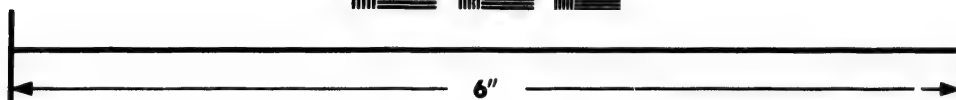
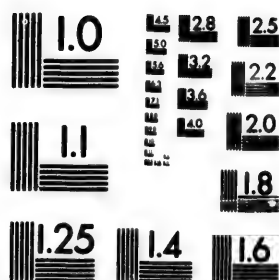


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REVENUE.

"The duties on gold and silver, among the most ancient in the vice-royalty, were at first very considerable, but afterwards declined, till, by a royal ordinance of the first March 1777, the contributions on the gold were reduced to three per cent.; and the double seigniorage was extinguished, the single alone being permitted. This revenue now amounts to two millions of *pesos*, the expences being only four hundred *pesos*. Plate, whether gold or silver, presented to be stamped, pays three per cent. besides other duties. To prevent the frauds practised by the artificers, it was determined in the Superior Junta, or Assembly, that they should be furnished from the mint with the gold they might want, at one hundred and twenty-eight *pesos* and thirty-two *marcos**, the marc of twenty-two carats (each of four grains), and that the silver should be supplied from the state coffers. The value of this branch amounts to fourteen thousand nine hundred and seventy-seven *pesos* annually. There are other duties on essays, &c. to the amount of ninety thousand *pesos*."

The tythes of the cathedral churches at first belonged entirely to the crown, and the clergy were paid from the royal treasury; but this plan has since been altered. It is unnecessary to enter into the details on this subject. The tythes of Panuco, New Leon, and Arispe, in Sonora, produce sixty thousand *pesos*. In other provinces the *ninths* are deducted for the use of the king, and valued at one hundred and ninety thousand *pesos*. These *ninths* are thus estimated: of four equal parts, two are allotted for the bishop and chapter, and the other two are divided into nine portions, namely, two for the king, three for building and repairing the church and hospital, two for the salaries of the curates, and the two remaining are disposed by the chapter in paying dignitaries, canons, prebends, and other persons employed in the church. The Annates, paid by ecclesiastics in the royal nomination, are of half a year's revenue; but the smaller livings, which do not exceed four hundred and thirteen *pesos* four reals, only pay a month. This branch clears sixty-five thousand *pesos*. That on the archbishoprics and bishoprics is uncertain, and of rare occurrence. It was proposed to raise six per cent. on all ecclesiastical benefices.

* There seems some mistake—*Maravedis*?

Civil officers pay half a year's salary, which is alike demanded on any REVENUE. advancement or augmentation. This tax might clear sixty-eight thousand nine hundred and forty-nine *pesos*. It is joined with that of the titles of Castille,* which yields thirteen thousand six hundred and sixty. The sale of offices produces thirty thousand; that of lands and composition for defective titles, only two thousand five hundred.

"The extraordinary fondness of the natives for cock fighting gave rise to a formal establishment in favour of this diversion, according to our author, much more rational than bull fights, whence a revenue to the royal treasury of not less than fifty thousand *pesos*; and in order to increase this advantage, a hall or theatre was constructed in the village of San Augustin de las Cuevas, much frequented by the citizens of Mexico during Easter. This building cost six thousand eight hundred and thirty-eight *pesos*; and in two years and eight months had yielded one thousand seven hundred and forty *pesos*."

A tax on leather was imposed by desire of the shoemakers. Snow and ice are monopolized in Mexico and other chief towns of New Spain; the product is about thirty thousand *pesos*. That of stamped paper clears sixty thousand: all the copper produced in the mines of this viceroyalty is bought on the king's account, and deposited in the royal magazines, whence it is sent to the mint, or sold to artisans and others; but the gain is only sixteen hundred *pesos*. That on lead is only five per cent. amounting to about eighty dollars a year; while the tenth of alum is four thousand four hundred and forty-six. "A mine of tin, which is wrought near Durango, pays ten per cent. being one hundred and eighty *pesos*."

The voluntary donations, chiefly given by the loyalty of the Mexicans, vary according to circumstances. Those on occasion of the last war against France amounted to five hundred and ninety-one thousand seven hundred and ten *pesos*; of which ninety-eight thousand six hundred and ninety-nine were annual during the continuance of hostilities. The sum would have been greater if the donation had not been preceded by a loan to the sovereign, without any interest, of three millions nine hundred and sixty-seven thousand *pesos*.

* A kind of *lettres de noblesse*.

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The customs and other taxes payable at Vera Cruz are too minute and prolix to deserve insertion; and there are some other provincial duties in the like predicament. There is a tax of nine *pesos* upon each negro brought to the port of Campeche; and it were well if every government raised a high tax upon this traffic. A ship of the Philippines pays at Acapulco two thousand *pesos*. The duties payable at the garrison of Carmen (probably that at the mouth of the Lagoon of Terminos, but there is also an isle so called in the Gulf of California) amount to two hundred and twenty *pesos* only. The pearl fishery of California formerly yielded a considerable revenue, but it is at present abandoned, though with hopes of its speedy revival.

Such is the curious detail of the revenues given by Estalla, from authentic documents: but to form a just idea of the total, it was necessary that he should have explained in what *peso* he makes his computations. From two passages it would appear that he uses the *peso fuerte*; but it is not impossible that he may have supposed the accounts to be in that coin, while in fact they were, as usual, in the common peso of exchange. Supposing, for the sake of a round calculation, that the revenues, which he says were on the increase, now amount to twenty millions of pesos, and that from this are deducted the salaries, assignments, and remittances to the parent country, mentioned in the beginning of this article, though a great part of the latter, in fact, belong to the royal revenue, as the months and half years of the benefices, and the expence of cards and tobacco, the deduction will be twelve millions two hundred thousand pesos; there will then remain clear seven millions eight hundred thousand, or about one million one hundred and seventy thousand pounds sterling; but if the *peso fuerte* be used, one-third must be added, which would swell the account to more than one million and a half sterling; which last is probably very near the truth.

Political
Importance.

The political importance of colonies is of course merged in that of the parent country. If the spirit of bigotry could be suppressed, which neglects every worldly concern, and if the Spanish colonies were thrown open to the industry and enterprize of foreigners, they might recover from their enfeebled state, and oppose a bold front to any invaders. In the present situation of affairs, perhaps sound policy would even dictate their

their emancipation, on condition of paying an annual tribute, which might even be more considerable than the present revenue, from the suppression of useless offices and emoluments, and the extortion of powerful individuals, which yields nothing to the revenues of Spain. Dr. Robertson has observed that the Mexican gazettes are filled with descriptions of religious processions, and edifying accounts of the consecrations of churches, festivals, and beatifications of saints, and other superstitious baubles, while civil and commercial affairs occupy little attention. The advertisements of new books shew that two thirds are treatises of scholastic theology and monkish devotion. Even this state of affairs is better than the sanguinary idolatry of the natives: but few exertions of ability or industry can be expected from such fanatics; and it may easily be predicted that a continuance of this spirit would render the people as unfit for war as for pacific enterprizes; and that if Spain do not amend her colonial system, her rich possessions will, at the first onset, become a prey to their northern neighbours.

Yet the remarks of a late Spanish author on this important subject deserve some attention." "The mode of making war with the savages on the frontier provinces is very different from that of Europe, as it consists in sudden invasions of the *Indios bravos*, or wild natives, after which they retire to the interior of their country, where it is very difficult to pursue them. For this purpose there are light companies, as well in the three provinces subject to the viceroyalty, (that is, the three audiences,) as in those that are independent; but peace is always preferred, and we only make war in consequence of their invasions.

"The situation of New Spain secures it from any foreign invasion. There is no haven on the east save that of Vera Cruz, strongly defended by a castle and fortifications, and still more by the north winds, which prevent any squadron from remaining long on the coast.

"On the side of the Pacific ocean there is no nation that would undertake a formal expedition, on account of the immense expence and waste of time, not to mention the hazards of the passage. Still more impossible would be an invasion by the province of Texas; because, not to speak of the immense distance, the passage of an army would be found

" Estalla, xxvii. 215.

impossible.

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impossible, through so difficult a country, void of means of subsistence." He then proceeds to mention the want of water, and the difficulties which M. Pagés encountered, without hinting a suspicion that his journey is a mere forgery.

This worthy patriot thus affects to conceal the chief danger, that from the United States, though he speak in just terms of admiration of their exertions, and of the spirit and talents of the inhabitants. The rumoured war between Spain and the States, on account of the boundaries of Louisiana, might soon reveal that the province of Texas, instead of wanting water, suffers from its abundance; and perhaps the sole impediment would be to distinguish the marshes from the verdant meadows. The chief difficulty would be for the States to find troops, for their brave militia would not easily be induced to quit their homes and families for this distant warfare; especially as the States have already too much land, and their wisdom would perceive that the acquisition of mines, and too easy wealth, at this period, might obstruct a far more important object, the cultivation of their own territory, and its gradual extension towards the Pacific, so as to command the East India trade. But if the contest became serious; if the honour and lasting advantage of the United States were once supposed to be implicated, they could by one effort send a sufficient force to seize the whole empire of Mexico, the difficulty being in the march, and not in the battle; and after an easy conquest, open a grand canal between the Atlantic and Pacific oceans, and command a prodigious commerce. Let me not however be again accused by the president of the French senate * of wishing to excite wars among all nations, because the nature of my work required some political remarks in the event, alas! too natural, that neighbouring nations should sometimes enter into hostilities. No: could my humble whisper command attention, peace and amity would encircle the globe; and nations should only be rivals in the arts, the sciences, and general beneficence.

* François De Neufchateau, *Tableau des vues que se propose la Politique Anglaise*. Paris, 1804, 8vo.

CHAPTER III.

CIVIL GEOGRAPHY.

*Manners and Customs.—Language.—Education.—Cities and Towns.—Edifices.—
Manufactures and Commerce.*

THE manners of the ancient Mexicans have been described by many MANNERS
AND
CUSTOMS. authors, but a few singularities may be here mentioned. A peculiar feature of the Mexican language was, that a termination, indicating respect, might be added to every word. Thus, in speaking to an equal, the word father was *tatl*, but to a superior *tatsin*. They had also reverential verbs, as appears from Aldama's Mexican grammar. Thus, as cowards are always cruel, the most ferocious people in the world were at the same time also the most servile and obsequious. Their wars were constant and sanguinary; and their manners in general corresponded with this barbarous disposition, the principal warriors covering themselves with the skins of the sacrificed victims, and dancing through the streets.* The year was divided into eighteen months, each of twenty days; and five days were added, which were dedicated to festivity. They cultivated maize and some roots; but their agriculture was rude, and they were strangers to the use of money. On the death of a chief, a great number of his attendants were sacrificed.

But since the progress of Christianity, and the long establishment of a foreign yoke, the manners have become more mild and amiable. So extremely attached are they to games of chance, that they will even pledge their own persons, as Tacitus reports of the ancient Germans; and the Spaniards make use of this infatuation to inveigle recruits for

* The dress was a loose cloak, and a sash girt round the naked waist. From the ancient paintings it appears that the under lip was pierced, to receive an ornament of gold. This custom La Perouse and others have observed on the N. W. coast of America.

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the Philippines, where they often display great valour.¹¹ They also sometimes pledge their persons for a debt, and labour in the public works until it be defrayed. As nourishment is cheap, and labour dear, they will in other cases gain enough in two days to support them for the week, whence they fall into drunkenness and other excesses, which our author ascribes to the want of education; whence also their impudence, and disposition to petty thefts, in which they are very dextrous. It is to be regretted that education is not bestowed, for they have a natural talent for many arts, working in wax, ivory, and glass, or rather earthen ware, with great skill; but as they do not make previous models, nor know the principles of design, nothing is perfectly finished. When the academy of the Three Noble Arts was established, an Indian presented a skull, which neither by the sight, touch, nor weight, could be distinguished from nature, and yet it was wood. Those who have received a little education become honest and decent, and are often named Alcalds, or petty magistrates in the villages. The Indians are also remarkable for their skill in preparing and staining the skins of the *cibolo*, or *tafugo*, which is the same as the bison, or wild buffalo.

M. Thiery, who has painted with a free and lively pencil the incidents of his interesting journey from Vera Cruz to Orizava, and thence to Oaxaca, or about three hundred and fifty British miles, in the empire of Mexico, often gives striking pictures of the national manners.¹² He observes that the Indians have a marked aversion to the negroes, whom they regard as scourges in the hands of their masters. Their chief food consists in cakes of maiz, called *tordillas*, which, as they are eaten hot, it is a chief duty of the females to prepare. They are often accompanied with *chillé*, a kind of sauce, composed of pimento and *lyco-pericon*, that is, *taumates*, or love apples, pounded together with salt and water, and which is also used with meat and fish. Their little huts resemble those of woodmen. The universal drink is *pulque*, drawn from the maguey, or *agave Americana*, which is to them of infinite use; the leaves, which are three and four feet in length, serving as tiles, while the fibres serve for thread and cloaths, the stem as beams, and the young sprouts as asparagus, while the juice supplies them with water, wine, vinegar, acid,

¹¹ Estalla, xxvi. 335.¹² *Voyage*, Cape François (St. Domingo), 1787, 2 vols. 8vo.

balsam, honey. An incision being made to the heart of the plant, the head is taken off, and a cavity formed in the trunk, sufficient to hold two or three French pints. The top is then replaced, and during the following day and night the sap transudes from the young leaves into the cavity, is withdrawn the following day, and afterwards, until the plant be exhausted and perishes, when the buds are planted to secure a new crop. Such is the origin of this noted beverage, which is not pleasant to an European eye, as being of a dirty white colour, and incapable of being clarified.

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The rude pyramids, sometimes forty feet in height, on a base of twenty, which are frequent in the Mexican dominions, seem to have served as sepulchres of distinguished chiefs. Thierry says, that they much resemble the *glacieres* of France or St. Domingo, a kind of rude hovels, raised for preserving ice. Baths for the sick, constructed on a very simple plan, are also not uncommon near the fountains. The Indian women are sometimes extremely beautiful, and dress in the Spanish fashion of this hot country, that is, in a shift and petticoat. The Mexican language, which they continue to speak, seems a perpetual whisper, in which the liquid *l* and the *e* are almost the only sounds to be distinguished.

The manners and customs of the Creols, or descendants of the original Spaniards, have in many instances become distinct from those of the parent country; and Estalla, probably from the relations of his friend Trespalacios, has entered into curious details on this subject. There is a general defect of education, and the manners are not a little corrupted in the populous, opulent, and delicious city of Mexico, the capital of all America. They are however very acute, and delight in satire and epigram; but when our author adds, that in time they may attempt greater objects, he forgets that, while it would be ridiculous to suppose that the climate of America is more inimical to talents than that of Europe, the real obstacle is the general fanaticism, which leads an indolent Spaniard to imagine, that while he is counting the beads of his chaplet, he is engaged in a pious exercise, as agreeable to the author of this sublime system of perpetual motion, as if he were exerting all his powers in some act of beneficence. The preponderance also of the ec-

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clerics, so foreign to genuine christianity, is another obstacle, as their very existence depends on the ignorance of the people, and in occupying their weak minds in processions, and other puerile exercises of pretended piety. Religion itself is excellent, and indispensable to the order and welfare of society; and if in a catholic country there be amusement in the pageants, it is certainly innocent; but when a government perceives that the industry and abilities of an entire people are stifled by these amusements, it becomes a duty, not to destroy before the materials for a new fabric be ready, but to employ rational and liberal teachers, in order to prepare the public mind for a gradual reformation, and on pretence of the propagation of religion itself, or its necessary defence, to seize on the indecent wealth of the ecclesiastics, and thus diffuse industry, without violence to the radical objects of popular faith. Were the king of Spain, with the spirit of our Henry VIII. to declare himself sole head of the church throughout his dominions, he might speedily introduce a powerful reformation, without however adopting the protestant system, which is totally foreign to the manners, feelings, and habits of southern nations, whose warm imagination delights in pomp and shew, and whose intense passions demand the soothing pardon of their excesses.

As the first colonists were chiefly Andalusians, the Spanish language is spoken with an accent not agreeable to a Castilian; and the men, as well as the women, have a kind of fawning affability, not agreeable to Castilian pride. When a Mexican lady receives a visit, she asks a long roll of questions all at once; "how do you do?" "how is your health?" "how were you the other day?" although they may not have seen each other for months. When two gentlemen meet, if the one feel himself inferior, it is, "you are my lord;" "you are my all;" or even, "you are my great lord:" while the women say, "you are all my desire."* The Spanish language is much corrupted in this country, an infinity of foreign expressions having been adopted, and a new acceptation given to many words and expressions; nay, there is even a mixture of the Mexican. This last might have enriched the language, new words being necessary for new objects; but in most cases they are merely

* He adds, that when they take leave they say, *á Dios, hé: basta luguño, hé: basta cada ratito, basta luguño.*

adopted

adopted from ignorance or affectation. Hence to a Spaniard some writings become more obscure than if they were in a foreign tongue; and if Spanish schools be not established, the language would become as distinct as the Portuguese; and they affect to ridicule those who do not understand their dialect, of the impropriety of which Estalla gives several examples. Even their authors cannot advance in the direct road to the temple of fame, but stray into thickets, and devious paths of quaint expression, where they often lose their health and reputation. They also often die of bombast and obscurity: and a work called a Continuation of the History of Solis might be regarded as the very quintessence of extravagance and pedantry.

These faults, says our author, disappear on the view of their extensive charity, of their burning devotion, and of their love to their sovereign. On occasions of epidemic disorders, and other public calamities, their beneficence is evident. The charitable establishments, and works of piety, would do honour to the parent country. Their devotion and zeal in the divine service must be seen, he adds, to be believed; and their loyalty is conspicuous in their free donations upon any public emergency.

Some little habits may also deserve mention. All the Mexican ladies smoke tobacco, in little cigars of paper, which they take from a case of gold or silver, hanging by a chain or ribbon, while on the other side they wear little pincers of the same metal. Continually occupied in this amusement, as soon as one cigar is exhausted another is lighted; they only cease to smoke when they eat or sleep, and even light a cigar when they bid you a good night. You may imagine, says our author, how ridiculous and disagreeable even a pretty woman becomes, with the eternal cigar in her mouth; how richly flavoured her breath must be; and how much her health and complexion are vitiated by this indecent and filthy custom. Girls never smoke in the presence of their fathers; nor are the latter supposed to know that they smoke, though they give them money to buy cigars. This affectation of ignorance is truly diverting: when a mother wants tobacco, she says to her daughter, "give me the cigars which I gave you to keep," knowing that she has given none; but with falsehood and dissimulation pretending to save appearances.

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ances of respect. The girls, who do not fear their mothers upon much more important occasions, are so circumpect in this chief business of their lives, that if the mother enter the room, the cigar is instantly hidden, because it would be very unpolite to smoke before the *nanita*, for so they call their mothers; while the father is styled *tatita*, a name also given in fondness to any man whom they esteem, *tatita* such a one being the physician, or any other person of great and immediate confidence. In another place he observes, that the girls address their mothers by *thou*, while the latter call them *sisters*, as expressing greater tenderness, but in fact that they may avoid the appearance of age.

The quantity of gunpowder consumed in fireworks, or rather squibs and rockets, is surprising, as they are played off all days in the year, except holy Thursday and Friday. The continual noise of bells is also horrible, as on the smallest occasion one is deafened every hour; but it is said that this infernal clamour is on the decline.

They are extremely fond of gaming, and affect supreme indifference and cheerfulness when they lose. A fellow enters a gaming house, produces ten or twenty dollars, which had been tied up in a corner of his mantle, lays them on a card, loses them; and, without saying a word, produces a cigar from behind his ear, lights it, and walks out, as if nothing had happened. The men easily assume a military air, and learn their exercise with much facility; but the soldiers of the villages are superior, as usual, to those drawn from the lees of the capital. When a boy has completed his rudiments, it is a day of rejoicing for the school and the family. A procession is formed from the school, with standard, drums and fifes, to the house of the parents. The masters say that this stimulates application, but they rather wish to profit by the foolish vanity of the relations. When any youth pleases in a ball, by his dancing, music, or voice, all, even the ladies, give him what is called the *gala*; nor can he refuse them without affronting the assembly. The dances of the common people are very wanton; even the most modest dances, in all ages, having been regarded as sacred to love, or preparatory to marriage, as innocent stimulants of the natural propensities of the sexes: nor are the songs dissonant from the indecent movements. In superior houses serious dances are usual; but for the sake of variety they are mingled with

with those of the country, as in Spain with the *volero*. The eve and day of All-saints there are great crowds, at the doors of the shopkeepers styled of Christ, both on foot and in carriages, to buy toys and sweetmeats for children, in both which the Mexicans excel. On other solemn days there are great assemblies, in different parts of the city, which are decorated with illuminations, and other ornaments of considerable invention. At the Indian festival, in the sanctuary of Guadalupe, near Mexico, an immense multitude appears, even from distant provinces, and much drunkenness and disorder ensue: but the Spaniards observe the festival in great devotion to that celebrated image, of which there are medals engraved by the celebrated Don Geronimo Gil.

In the description of the city of Mexico, some idea will be given of other festivals there celebrated. The citizens were formerly contented to follow the trade of their fathers, or to obtain some chaplaincy, the number of chaplains being infinite, and often with considerable salaries.²⁰ They studied in the university of Mexico, and vegetated in that city, with the warm approbation of their parents, who thought it the happiest day of their lives when a son became a priest, or a daughter a nun. At present matters are happily a little changed; many Mexicans leave their country to visit the *Peninsula*, a new name for Spain, or to view courts, and aspire to all employments political, ecclesiastic, and military: nay, the women willingly wed ministers, officers, and merchants, and leave their country with pleasure. The Creols, as our author here repeats, have the happiest dispositions for all the arts and sciences, though education be neglected, and the method of study be far from being worthy of the natural talents.

In this happy climate nature anticipates her rights, especially in the female sex, which of course is sooner exhausted than in Spain. At the age of thirty, especially if they have borne some children, women appear as aged as in Spain at fifty; the teeth falling out, and the face being totally faded. The climate no doubt contributes to this, but still more the shocking plan of diet. The whole day is employed in eating: in the morning they take chocolate; breakfast at nine; take an *once*, or another breakfast at eleven; and soon after noon they dine. After

²⁰ Estalla, xxvi. 301.

having

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having taken the *siesta*, or day sleep, they return to their chocolate, which is succeeded by an afternoon's luncheon, more chocolate, and a considerable supper. A still greater absurdity is, that you can only acknowledge the goodness of your dinner, or supper, with the tears in your eyes. A meal at which no one cried would be regarded as good for nothing, a great delight of the ladies being to shed tears all the time; such is the force or quantity of the *chile*, or pimento, with which they season every dish, a dainty no less disgusting than prejudicial to health. To these excesses in food may be added the infamous practice of smoking; so that it is not strange that in a few years the women become decrepid, and that they suffer greatly from defluxions.* It may be matter of surprise that the influence of the more powerful sex does not prevent these disorders, by authority, neglect, or contempt; but it must be considered, that in Spain itself, so much is the character debased, that the politeness of the men has reduced them to absolute cyphers; and so severe is nature, that wherever females obtain the ascendancy, they not only work political ruin, of which regal France affords a disastrous example, but their own degradation and calamity, while their happiness totally depends on the superior judgment and equanimity of their partners.

The Mexican ladies prefer the Spaniards, whom they call *Gachupinés*,† to the Creols; and have reason on their side, because the former are more constant and generous, and give them all sorts of pleasures and diversions; while the Creols, born to abundance, inheriting property without labour, commonly waste it in a few years, though they bear the misfortune with indifference; whence the proverbial saying concerning the Creols, "the father a merchant, the son a knight, the grandson a beggar."

The women in general are moderate in their apparel: a laced veil descends to the feet, the manufacture of the country, and costing from eighty to a hundred dollars. The *basquina*, or large upper petticoat,

* Our author adds, that when this is the case, the ladies wear a small handkerchief pinned to one side of their head-dress, which they call *barbiquejo*; and during another period peculiar to the sex, they fasten over the forehead a handkerchief, commonly black, which is called *pena*.

† Perhaps from *gachon*, a spoiled child.

also descends very low; and the shoes are always neat, sometimes rich. When they are at home, or go out in a carriage, they wear what is called the *rebozo*, or muffler, like the shawls now used at Madrid. They do not now load themselves with those costly gowns called *metallic*, because they were of a gold or silver tissue, so stout as to stand upright; but in their place have adopted the present fashions of Spain, which have the double advantage of costing far less, and of giving more grace and a more gay air to the fair sex. Yet the Mexican women are ostentatious of wealth, in the quantity of their diamonds, and the size of their pearls, as may be observed in their balls and festivals.* The dress of the men has also undergone the same change; and there is little difference in this respect between them and those of Spain, though the houses boast greater wealth in silver images of saints, cornucopias, chandeliers, and other furniture.

The men of the lower class, whether whites, or of whatever other cast, were all, a few years ago, wrapt up in mantles, without any other dress, except drawers and a little hat. This dress served them for street and chamber, and even for bed, which was merely a raised part of the room, covered with a mat called *petate*. The greater part, composing two thirds of the inhabitants, had no other articles whatever. But latterly effectual regulations have been made to prevent the indecent nakedness of this class, who are forbidden to enter various public places,

* The use of the *mantilla*, or cloak, arranged with such coquetry by the Spanish ladies, would seem to be unknown, as being perhaps too warm for the climate. M. Thierry, ii. 7, describes the ladies of Vera Cruz as being covered when abroad with a long silk cloak, with only a little opening on the right side, that they may see their way. At home they only wear over their shifts a little corset of silk, laced with a cord of gold or silver, while their head-dress is composed of their own hair, fastened at the top with a ribbon; yet with this simple dress they wear chains of gold around the neck, golden bracelets on their wrists, and beautiful emeralds in their ears—so irregular are taste and fashion! At Quicatlan (i. 105) he found the Spanish, or Creol women, sitting by the fountains, combing and washing their hair, a favourite practice. They afterwards, by way of soap, use the bruised root of a *polientar*, and extend their care to their neck and shoulders, whose whiteness contrasts with their jetty tresses. When dressed, their long locks, divided into two tresses, and braided with a rose coloured ribbon, descend to their feet. "A very white shift, a petticoat of muslin with *salbatalas*, or corruptly *furbelous*," (Johnson in voce, drolly *etymologizes* this solemn term, known in a good catch, from the *fur below*; that is, says he, fur sewed on the lower part of the garment), "a scarf of cotton crape, or coarse gauze, sometimes bordered with a fringe of gold or silver, gracefully raised over the head, or upon one shoulder, and a nosegay over the ear, such is all their art, but it would not be disdained by our coquettes."

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except they be decently clothed, so that this evil begins to be remedied. Formerly it was common to see them drop their mantle after mass, so that nothing remained but the drawers. It is surprising that our author should make no reflection on this singularity, after having depicted the excessive ornaments of the rich; as there cannot be a more striking sign of a bad government, while a prosperous nation may easily be known by the numbers of the middle class, in which are chiefly centered the wisdom and talents of society, and by the decent and comfortable appearance of the poor.

The frequent use of the bath partly atones for the want of linen; and the climate being dry and warm, renders this custom agreeable, and salutary against the maladies occasioned by that deficiency. There are at Mexico a great number of baths, and *temascales*, a kind of steam baths used by the ancient natives; but the best order does not prevail, and the police should interfere. This want of linen might certainly have been easily supplied by an industrious people, in so wide a territory of such various climates; and even the use of fine cotton next the skin is far from being so salutary as that of linen, the nations who use it being observed to be more subject to inflammatory and cutaneous disorders.

Language.

Of the Mexican language grammars and dictionaries have been published in the country; and from the few specimens contained in European publications it appears to differ radically from the Peruvian. The words frequently end in *//*; and are besides of a surprising and unpronounceable length, resembling in this respect the language of the savages in North America, and some of the African dialects; but strongly contrasted with those of Asia, in which the most polished, as the Chinese, are monosyllabic. According to Clavigero the Mexican tongue wants the consonants *b, t, f, g, r,* and *s*; in which respect only, though unobserved by that author, it strictly coincides with the Peruvian; except that the latter, instead of the *s*, is said to want the *z*, a mere difference of enunciation. But the Peruvian is a far superior and more pleasing language, though some modifications of the verbs be of extreme length. The wild enthusiasm of Clavigero compares the Mexican with the Latin and Greek; though as like, as he to Herodotus. Some of the words are of sixteen syllables. Their poetry consisted of hymns, and of heroic and

amatory ballads. They had also a kind of dramas; but from the specimens produced they do not seem to have been superior to those of Otaheite.

Estalla has observed, as above mentioned, the defects of literature in this opulent viceroyalty. A Mexican Guide has lately been published in the city, a prodigious exertion: but the Mexican gazette yields greatly to that of Guatemala, which, according to Dr. Barton, sometimes presents interesting memoirs on the antiquities and natural history of the country. Some pamphlets on Mexican antiquities have also appeared; and botany begins to be studied: there has been even recently published a work on mineralogy, digested according to the system of Werner. These are, no doubt, favourable appearances; but why should this wide empire, with so considerable a population, be a century or more behind the United States? The Spaniards are confessedly a people equally solid and ingenious; and the only possible obstacles must be sought in the inquisition, and that degrading fanaticism maintained by the avaricious preponderance of the clergy.

The *Teatro Americano* of Villafenor, published in two volumes folio, 1746, may, with all its defects, be regarded as the chief solid monument of Mexican literature. But two thirds of this useful work, which displays a detailed chorography of the provinces of New Spain, are occupied with the most prolix documents concerning the clergy and religious foundations, wholly uninteresting except to their own order: nay, the valuable compilation of Alcedo, printed at Madrid 1787, after presenting catalogues and short accounts of the viceroys and governors of the several provinces, often useful to history and geography, is loaded with similar details concerning archbishops and bishops, of no utility in any branch of science. A rational christian, conversant in the precepts of the gospel, above all the humility and self denial that are inculcated as the very essence and being of religion, will be astonished and afflicted at the deep depravity of human nature, which can convert such a beautiful system of practical morality into a perfidious instrument of avarice and extortion, pride and ostentation. And while the very teachers are thus lost to all sense of propriety, decency, and shame, as not only to

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load themselves with wealth and honours, generally at the very expence of the poor, for whom the foundations were originally endowed, but to publish splendid descriptions of their usurpations, need we wonder that, by the confession of the Spanish authors, the savages become more corrupt and immoral, in proportion as this new-fashioned system of pretended christianity makes any progress? Nor can it escape the learned reader that, as in the times of chivalry, all wars were wholly conducted at the expence of the king and the barons, except on extraordinary emergencies, when a subsidy was raised on the merchants, and other persons in easy circumstances, so the only poor tax was, so to speak, levied on the clergy, whose rich revenues had been merely assigned, by the pious donors, in support of the poor; and it is well known that it was the suppression of religious houses, and a part of the wealth of the prelates and dignitaries, which introduced the poor tax into England after the Reformation. But the Spanish clergy and religious orders are wallowing in gluttony, luxury, and voluptuousness; while the poor, whom they have despoiled, have not, as we have seen, cloaths to cover their nudity. Yet these are the men who pretend to be the only disciples of the Father of Light, and yet envelope entire regions of the globe in a total eclipse of reason, in a palpable mental darkness, that they may rob without being seen, and enjoy without being questioned. Such reflections are necessarily excited, not only by the deplorable state of the sciences, arts, and industry in this extensive and opulent empire, but by the miserable poverty of two-thirds of its inhabitants.

Universities
and
Education.

The state of education, if it deserve the name, is so intimately connected with that of the universities, and other literary foundations, that an account of the latter must suffice. The university of Mexico, founded in 1551, is styled Royal and Pontifical: and the *cloister* is composed of two hundred and fifty-one doctors, of all sorts of faculties, except the faculty of reasoning. It is governed by a rector, elected yearly by the lesser *cloister*, composed of the former rector and eight counsellors, chosen by lot from the doctors and batchelors. The office of chancellor is annexed to the dignity of schoolmaster of the metropolis; his office being to preside at conferring some degrees, while on other occasions he holds

holds the second rank. The statutes were compiled by Palafox, and the method of studies remains the same as at the beginning, and similar to that of Salamanca, that is calculated to diffuse a most glorious darkness.*

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The chairs or professorships are, the First, and those of Vespers, Scripture, St. Thomas, and Duns Scotus; the two last being filled up by the holy order of St. Francis. In law there are the First of the canons, the vespers of the canons, the temporal of the Clementines, &c. In medicine six. In botany a director and a professor, or in the Spanish, a *cathedralist* of botany, who also lectures at the royal botanic garden. In philosophy two; rhetoric one; one for the Mexican language, and another for the Otomite, the two most universal in the viceroyalty, and useful in the conversion of the savages.

At first all the seats were filled by the votes of all the scholars, so that the candidates were obliged to gain general esteem. At present the professors are named by a most venerable junta, consisting of the archbishop, in whose palace it is held, of the regent of the Royal Audience, the dean of the cathedral, the oldest inquisitor, the rector of the university, the master of the metropolitan schools, the professor of the first class of theology, and the dean of the faculty.†

The public library of the university was founded about forty years ago, and is well furnished with old books of divinity, but for new editions of the classics, or new works of science and philosophy, you may look in vain; because, says our author, certain incidents have prevented the full enjoyment of the revenues, though equal to any in the peninsula, that is, in Spain." In fact, the salaries of two hundred and fifty-one useless doctors, might consume even royal revenues; and it would be preferable to have only one doctor, and two hundred and fifty new books. This library is open to the public, except on Sundays and holi-

* There is another university at Guadalaxara, or rather two colleges; one the seminary of the cathedral, the other for writing and the Mexican language. There were also two colleges at Guatemala.

† The degree of doctor is acquired at a great expence, generally defrayed by some rich patron. A mark of this degree is a ring. The bonnet and roquet are exposed with great pomp from the balcony of the patron. If a doctor of medicine be named, a spur is put on; probably an old pun, as the same word in Spanish signifies advice; perhaps it may signify that they lead spurs to the disease. Estalla, xxvi. 350.

" Estalla, xxvii. 258.

days,

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days, from seven to eleven in the morning, and from three to five in the evening; there being two doctors librarians, a morning doctor and an evening doctor; and one servant to bring the books: all eunuchs, worthy of such a haram.

The college of St. Mary-of-all-saints is the only one of the first rank in the Spanish American possessions. It was founded by the most glorious, illustrious, venerable, and wonderful lord and doctor, Don Francisco Rodriguez, &c. Santos, bishop of Guadalaxara, and dedicated to the Most Holy Virgin Mary, under the advocacy of the assumption; for which, and manifold other reasons, it was baptized St. Mary of all Saints. There are ten dignitaries, four in divinity, three in canon law, and three in civil; "the candidates exhibit public and secret informations of *nobility* (perhaps sixteen quarters), literature, and moral manners; afterwards undergoing a regular examination, in which he must make a discourse, and answer all sorts of arguments." This college, being regarded as secular, is subject to the viceroys. The design was to afford to youth, who had studied in the lesser colleges, an asylum, where they might perfect themselves in theology and law, while it is one of the poorest establishments in the viceroyalty. Yet there is a public library, which, according to our author, contains some rare manuscripts, probably relative to the ecclesiastical history of New Spain. The catalogue of distinguished members of this college was printed at Mexico 1796.

The seminary was founded by an archbishop of Mexico in 1682, according to the exact method ordered by the holy council of Trent. There are at present thirteen professors. As the old edifice was not sufficient, for the students amounted to four hundred, a new building was erected in 1750. The method of study has been somewhat reformed; and instead of metaphysical subtleties, the belles lettres and useful studies begin to be substituted; and the printed themes begin to display some acquaintance with good authors. The students are also encouraged by rewards, and a more free access into other literary societies. A fund of sixty thousand *pesos fuertes*, or hard dollars, yields a revenue of three thousand, which serves to found an yearly chaplaincy; and there are scholarships for the poor, with books and cloaths. In the month of August

August there is a solemn distribution of prizes by the archbishop, amidst a brilliant assembly.

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The jesuits had formerly five colleges, of which two alone remain, and are directed by the viceroy, or rather by a junta, presided by the archbishop, and, in one only, grammar is taught to the Indians.* The other, called San Ildefonso, is nearly on the same footing with the seminary, there being one professor of scholastic divinity, one of law, three of philosophy, three of grammar; but though many illustrious members have endeavoured to exclude the peripatetic subtleties, it has been hitherto found impossible to overthrow the strong barriers against the necessary reformation, which however must succeed at last; and since 1796, the themes begin to display some acquaintance with solid authors. The buildings are magnificent, and may be compared with any in Europe; the chapel and grand hall being the most beautiful in the viceroyalty.

The college of St. John Lateran is the most ancient of any in New Spain, having been founded in the reign of the emperor Charles V. for the instruction of those descended from Spanish and Indian parents. It was however in a poor condition, until 1764, when the plan of studies was enlarged, and somewhat approaches to that of the seminary. In 1789 it was still further improved on the European plan; but the course of life is still too severe, and only serves to frustrate the intentions of the institution.

The college of St. Jago is without the walls of Mexico, in a house of the Franciscans, but is at present merely a boarding school for children, who are taught grammar, philosophy, and divinity, such as they are; for Duns Scotus maintains all the obscurity of his reputation, in spite of the opposition of some of the friars. Other religious orders have also public schools. In general, in all these colleges, the ancient plans are obstinately pursued; and all the windows have strong blinds, in order to exclude any modern light, the gravitation of Newton being only known by the corpulency of the professors. The college of San Ramon is rather an hotel, where are maintained the young men from the bishoprics of

* The late King Charles III. founded a college for noble Indians, under the style of St. Carlos, but as he forgot to assign any funds, the design unexpectedly fell to the ground.

Havanna,

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Havanna, and Valladolid in Mechoacan, who study law in the royal university.

Such are the ancient institutions. The modern are of a more pleasing and instructive nature. A deficiency having been observed of men capable of directing the mineralogic operations, so general in this opulent viceroyalty, a College of Mines has at length been erected, where youth are not only instructed in that science, but in other important parts of education. In the first place, all the antiquated practices of the colleges, in their internal distribution, in the dress, manner of eating, and other forms prejudicial to youth, have been totally banished; whence the happy consequence has arisen, that the scholars have, with less fatigue, and far more advantage, been instructed in all the objects which form a skilful and virtuous man. The studies pursued are Spanish and French grammar, drawing, mathematics, natural philosophy, chemistry, and mineralogy, the practice being throughout united with the theory. Public rewards are assigned in presence of the tribunal of mines, and an assembly of the principal inhabitants, the hall being splendidly adorned, while an orchestra of music diversifies the exhibition. The collection of machines and models is numerous and excellent, and the new edifice said to be elegant and well arranged.*

The royal academy of the Three Noble Arts is a valuable institution. The silversmiths are obliged to send their apprentices to study drawing; and it would be well if some other professions were in the like predicament. The academy is provided with good professors in architecture, painting, sculpture, and engraving, in which last three hundred *pesos* are given to a master to teach the art to select disciples. There is also a professor of mathematics, to assist the class of architecture. Models of ancient statues have been brought from Spain, and there is a small collection of paintings. The funds are thirteen thousand *pesos* from the royal treasury, one thousand from the city of Mexico, five thousand from the

* Among the first fruits of this institution is *Delrio Elementos de Orisognofia*, part i. containing the earths, stones, and salts. Mexico, 1795, 4to. pp. 11. and 171. This work, constructed on the principles of Werner, is designed for the use of the seminary of Mexico.

† Estalla, xxvii. 300.

tribunal of mines, two hundred from Vera Cruz, two hundred from Guanajuato, &c. and four thousand, as the interest of eighty thousand of principal; so that the whole revenue is twenty-six thousand five hundred and eighty *pesos*, while the salaries, pensions, and rewards amount to twenty-five thousand and forty-three. Architects, sculptors, painters, and surveyors, are regarded as responsible to this academy.

There are also particular houses in Mexico where Latin grammar is taught, by preceptors approved by the government and university, though in fact of small skill and reputation, so that the colleges are generally preferred. "In the primary schools for children, I have observed with pleasure considerable improvements. Some masters have adopted the excellent method established in the royal schools of Madrid, and in that of the royal committee, abandoning the barbarous routine of the old schoolmasters. The public examinations held in Mexico evince the superiority of the new method."

The royal garden of botany in New Spain is regarded by our author as a medical institution to discover the virtue of plants. A new course is held every year, frequented not only by students of medicine, but by other curious persons, yet the botanic garden, in 1799, was of small account, and only regarded as provisional.* And though there be professors of medicine and surgery in the royal university, yet they are merely theoretic, and employed in discussing whether medicine be an art or a science, and other questions of large leaves, many prickles, and small fruit. Some little idea of practice is acquired in the hospitals; but when one of the faculty projected a chair of practical medicine, death got angry, and laid violent hands upon him.

From the preceding account, carefully extracted from a recent and intelligent Spanish author, it may be observed that the chief object, the diffusion of a good and solid education, would still appear a novelty. The improvements in the primary schools afford consolatory ideas; but the chief object should be to increase their number, to educate and prepare proper masters, and to assign permanent salaries, to be derived from a portion of the immense possessions of the church, which would be far

* There were, however, in 1798, three thousand plants, of which half were unknown in Europe; there was also a great collection of quadrupeds, birds, &c. Estalla, xxvii. 194.

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more laudably employed in teaching virtue and science, than in maintaining ignorance and luxury.

The chief city of New Spain, and all Spanish America, is MEXICO, celebrated for the singularity of its situation. In a beautiful vale, surrounded with mountains, the lake of Tezcuco is joined on the south to that of Chalco by a strait, on the west side of a tongue of land, the whole circuit of these lakes being about ninety miles. In a small isle to the north of this junction, and upon the west side of the lake of Tezcuco, rose the old city of Mexico, accessible by several causes raised in the shallow waters, but on the east side there was no communication except by canoes. It is said by Robertson, from recent Spanish documents, to contain 150,000 inhabitants; of which probably a third part is Spanish. A recent account of this remarkable city is given by Chappe D'Auteroche,* who visited it in 1769, and informs us that it is built upon a fen, near the banks of a lake, and crossed by numerous canals, the houses being all founded on piles. Hence it would seem that the waters of the lake have diminished, so as to leave a fenney access on the west.† The ground still yields in many places; and some buildings, as the cathedral, have sunk six feet. The streets are wide and straight, but very dirty; and the houses, resembling those in Spain, are tolerably built. The chief edifice is the viceroy's palace, which stands near the cathedral in a central square, but is rather solid than elegant. Behind the palace is the mint, in which more than a hundred workmen are employed, as the owners of the mines here exchange their bullion for coin. The other chief buildings are the churches, chapels, and convents, which are very numerous, and richly ornamented. The outside of the cathedral is unfinished, as they doubt the foundations; but the rail round the high

* Voyage to California, 1778, 8vo. This short but curious work seems to have escaped Dr. Robertson. A plan of Mexico is inserted, but injudiciously not extended to the lake. The account of Mexico by Pagés seems only to evince that his work is a fabrication.

† This probably happened after 1629, when there was a remarkable inundation, and a wide canal was led through a mountain to drain the lakes. The large lake is saline, the bottom being nitrous; but that of Chalco rather sweet. Certain it is that the site of the city is the same with the ancient, the viceroy residing on the spot of Motezuma's palace, in a large mansion built by Cortez, and still rented at four thousand ducats from the Marquises del Valle his descendants. La Croix, ii. 381. But compare Careri, who has given from the original papers a curious detail concerning the procedure in draining the lakes.

altar is of solid silver, and there is a silver lamp so capacious that three men get in to clean it; while it is also enriched with lions' heads, and other ornaments, in pure gold. The images of the virgin, and other saints, are either solid silver, or covered with gold and precious stones. Besides the great central square there are two others, each with a fountain in the middle. "To the north of the town, near the suburbs, is the public walk, or *Alameda*. A rivulet runs all round it, and forms a pretty large square, with a basin and *jet d'eau* in the middle. Eight walks, with each two rows of trees, terminate at this basin, like a star, but as the soil of Mexico is unfit for trees, they are not in a very thriving condition. This is the only walk in or near to Mexico; all the country about it is swampy ground, and full of canals. A few paces off, and facing the *Alameda*, is the *Quemadero*; this is the place where they burn the Jews, and other unhappy victims of the awful tribunal of inquisition. This *Quemadero* is an enclosure between four walls, and filled with ovens, into which are thrown over the walls the poor wretches who are condemned to be burnt alive; condemned by judges professing a religion whose first precept is charity." The Spanish inhabitants are commonly clothed in silk, their hats being adorned with belts of gold and roses of diamonds; for even the slaves have bracelets and necklaces of gold, silver, pearls, and gems. The ladies are of distinguished gallantry. Mexico, though inland, is the seat of vast commerce between Vera Cruz on the east, and Acapulco on the south; and the shops display a profusion of gold, silver, and jewels. In magnificent regularity it yields to few cities even on the ancient continent. Gage, whose authority was used by the most recent writers in the defect of other materials, says that in his time, 1640, there were supposed to be fifteen thousand coaches, some of them adorned with gold and gems; the people being so rich, that it was supposed that one half of the families kept equipages."

To the preceding brief description of this celebrated capital may now be joined a selection of recent circumstances, from the work of Estalla, published in 1799; and as, in the whole of this description of New Spain, details of considerable length have been given, not only because

¹ D'Anteroche, p. 44.

² Survey of the West Indies, 1655, fol. p. 56.

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all former descriptions were so antiquated and defective, that this region had become the very reproach of geography, but because the country itself is in many respects one of the most singular and interesting on the face of the globe, so this account of the metropolis of America shall be more than usually ample and minute.

The air of Mexico is very subtle, and dangerous when confined in narrow passages; hence the lake does not produce such humidity as might be conceived, and the bodies of dead animals remain long unconsumed. The lake, as already seen, has retired a Spanish league from the city; and some think that this circumstance renders the air less healthy, for too dry a climate may produce accidents and sudden deaths. There are however many water courses, covered and open, but they are cleansed only once in two years. The winter frost is gentle, and is thought severe when the ice exceeds the thickness of paper. The summer heats are tempered by the regular showers which fall in the evenings. Betwixt twelve and one o'clock, during the rainy season, the clouds begin to rise from the lakes; and betwixt two and three descend in violent showers, of which an European can hardly form an idea, except by comparing the noise and rapidity to a storm of large hail. The rain continues two hours, more or less; and is sometimes accompanied with lightning, not without accidents. Sometimes there are water spouts, which however have never been known to have fallen on the city, but always on the lake. They however sometimes ruin mining stations; and our author says that they have been known even to level hills. Though just within the tropic of Cancer, the yearly cold at Mexico appears, from thermometrical observations, to exceed the heat. The rainy season extends from the middle of May to the middle of September; during which, as has been mentioned, it rains every evening: if it failed the harvest would be lost, and there would be many diseases, which have sometimes degenerated into the contagious form.

The plain of Mexico is about ninety leagues in circumference, and enclosed on all sides by mountains, covered with cedars, many rare shrubs, and medicinal plants; while they contain minerals and precious stones. These mountains are studded with romantic villages and farms, watered with crystal rivulets. Near the middle of this delicious plain are the

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lakes Tezcuco and Chalco. Estalla informs us that the waters, not many years ago, reached to the city; but he adds, that Don Domingo de Trespalacios, uncle of his friend, who gave him the most recent intelligence concerning New Spain, had constructed a dyke on the side of San Lazaro, that the city might not be inundated; and which still exists, though of no utility, because the lake had retired nearly a Spanish league, or four English miles.* The capital, by his account, remains in the same position as when founded in the christian year 1327." And since the year 1712 there have been no augmentations, though the churches and houses have been beautified, the increased number of inhabitants being accommodated by the greater height of the houses, and the more splendid part of the capital being reduced to narrower bounds. The streets are well opened, proceeding in right lines from east to west and from north to south; and though the soil be marshy, the foundations are rendered firm by art and industry. It is incredible how much this grand capital has been decorated and improved very lately, both in its interior and environs, great cleanliness and a good police having been at the same time established, so as to have become the largest, most beautiful, and sumptuous of all the Spanish monarchy. The cathedral church is a magnificent edifice, the erection having occupied ninety-four years; there are two images of the virgin; one of gold, which weighs six thousand nine hundred and eighty-four *castellanos*,* and is adorned with precious stones; the other of silver, weighing eighty-three marks, or about fifty-five pounds. The service is performed with singular pomp and splendour. Though the parishes do not exceed fourteen, there are more than one hundred other churches, mostly neat and richly decorated. The religious houses are surprisingly numerous, and the nunneries amount to twenty, one of them having been the residence of the celebrated Mexican poetess, Juana Inés de la Cruz.

Among the numerous courts of justice and offices here established, are the royal audience and chancery of New Spain, whose jurisdiction extends on the north from the Cape of Honduras to Florida, and on the

* Estalla, xxvii. 72.

" Ibid. xxvi. 253.

* A castellano is the fiftieth part of a mark, while a mark is two-thirds of a pound, or eight ounces.

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South from the audience of Guatemala to that of Gaudalaxara; the court for strangers, and those who die intestate; the royal tribunal of registers; the royal coffers or general treasury; the royal mint, and many others: not to speak of the tribunal of the inquisition; the house of the missions of California; the mount of piety, erected by the charity of the Count de Regla, who gave no less than 315,000 pesos; the royal tribunal of mines; that of the estate and marquise of Valle, or the descendants of Cortez; the illustrious chapter, justice, and government of the most noble and imperial city itself, to which the ancient arms were confirmed by Charles V., being a castle with three towers, an eagle on a tree with a snake in its beak; at the foot of the tree is the lake; the whole surmounted with an imperial crown, and supported by two lions. Philip V. granted to Mexico, in 1728, all the privileges and distinctions of a grandee of Spain; and Charles III. in 1773, indulged the *chapter*, or magistrates, with the use of uniforms laced with gold, declaring their precedence over all tribunals and bodies, except the royal audience and the tribunal of accompts. The patroness of the city is St. Mary of Guadalupe, solemnly chosen in 1737, and whose worship has extended over all Spanish America.

The natives have considerable dispositions for the arts, and in painting they boast of Cabrera, Enriquez, Vallejo, Pelaez, and Don Juan Patricio. Their general character is that of a liberal, courteous, affable, and charitable people. The universities and colleges have educated many archbishops and bishops, viceroys, ambassadors, and magistrates; but not one author of any distinction, though this be an object of far greater glory, and might have diffused its reputation over both hemispheres.

There are thirteen hospitals, and other charitable establishments; a house of refuge for married women; that of the Magdalen for abandoned females; a foundling hospital; a general hospital for the sick poor and beggars. There are also several houses for female orphans, who are fed at a good table, and receive one hundred dollars a year, and five hundred when they are able to establish themselves. Other girls, drawing lots at the cathedral, receive certain perquisites; and sometimes, when

when they wish to marry, already possess from six to eight thousand CITIES. dollars.

The mount of piety has already been mentioned; and this useful institution in favour of the poor, who are in many countries devoured by the infamous usury of the pawnbrokers, ought to be an object of universal imitation. There is a general hospital for the Indians, of which the expences are defrayed by themselves; but the family of Cortez the conqueror maintains another hospital for the Indians, with such excellent assistance that they are eager to enter. Among several other hospitals that of San Lazaro receives lepers, an ancient malady revived in America, where it is chiefly imputed to the use of cotton shirts, or other garments of that material, while some add the use of pork, of which there is a great consumption, and that of *chile*, or pimento sauce; and some suspect the venereal disease; but the chief cause seems to be the want of cleanliness. The civil and military officers have a chest for the relief of their widows, who derive a revenue equal to the fourth part of their husband's salary. This might well be imitated in England, where the widows of deserving officers are often left in great distress.

The viceroy is commander in chief, and president of the economical and political government; and for the daily dispatch of business there are two officers besides that of the Secretary. He resides in the royal palace situated in the great square, a considerable edifice, extending about two hundred and thirty yards, and also containing the royal mint, and the three halls of the Royal Audience, two for civil cases, and one for criminal.

"The holy tribunal of the faith always consists of three inquisitors, two being judges, and one fiscal; four counsellors of the gown, two ecclesiastical counsellors, an *alguacil*, four secretaries, and a treasurer, with other officers necessary to its harmonious arrangement; the court of judgment, tribunals, and habitations, being close by the imperial convent of St. Dominic, where are celebrated all the public functions of the inquisition, the building being of sumptuous appearance."

The viceroy is also president of the tribunal of accompts, which inspects all those of the royal revenue. The tribunal of quicksilver supplies

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pplies all the mines with that indispensable article. The mint has a number of necessary officers, and its labour is greatly augmented; for while in 1743 the coinage was eight millions one hundred and twelve thousand dollars in silver, with five thousand nine hundred and twelve marks of gold, there has latterly been struck to the annual amount of twenty-six millions of dollars. Most of the other tribunals are in the palace. The custom house has a regular guard, to observe all articles that enter or leave the city. The city council is near the royal palace, consisting of a *Corregidor*, or corrector, the Spanish title for a mayor or chief magistrate, twelve *Regidores*, or aldermen, and other officers. The junta of the *Pósito* presides over the grain and other supplies of the city; while that of the police superintends the buildings, pavements, and cleanliness of the streets. There are common Alcalds, who judge civil and criminal cases in the first instance; but an appeal lies to the royal audience. With regard to the Indians the city is divided into two parts, called the divisions of Tenucas and Tlatelucas, having each their governors, Alcalds, and other officers, perfectly acquainted with the houses and persons of each individual, probably with a view to prevent insurrection. The first division contains more than six thousand families of Indians; the second more than two thousand five hundred: but they all seem to be chiefly established in the environs, as they are counted by villages and farms.

The city of Mexico is abundantly supplied with grain, fruit, and the productions of the garden, from the environs, which are very fertile, except on the eastern side of the great lake of Tezcuco, as the saline waters and vapours impede the vegetation. The more populous and crowded parts of the city extend from north to south one Spanish league, or four English miles; and from east to west three quarters of a league, or three English miles; and though the houses extend to Tacuba, there is only one street from San Hipolito.

At the distance of two Spanish leagues, at the place called Mexicaltzingo, begins the other great lake, that of Chalco, about five leagues in length from north to south, and about as much from east to west, affording ample space for the crowded traffic of canoes, which bring all the
products

products of its circumference. In the midst, beside the royal canal, are CITIES.
seen various villages, among which is that of Ixtacalco, with a Franciscan convent, much frequented by the citizens after Easter.

To pursue the somewhat desultory description of our author, the city of Mexico is not surrounded with walls or other defence; there is only a trench, or ditch, serving as a barrier to collect the duties and prevent smuggling. The chief gates are that of Guadalupe, on the road to that sanctuary, and those of Los Angeles, Tlalapa, Chapultepec, San Anton, and San Lazaro. All the *pulque* enters by the gate of Guadalupe, and this general drink of the Indians and of the poor now yields about a million of dollars to the king. When a new cargo enters, this joyous occasion is celebrated with banners, music, and incredible uproar. The streets, generally reaching from one extremity to the other of the city, are now well paved, but are so even, that during rain it becomes necessary to be carried on the shoulders of the Indians from one foot path to the other. In the midst of the great square is a fountain, with a horse of bronze; the palace of the viceroy has a considerable garden, where he sometimes erects a tent, assumes a country dress, and dispatches business; but in general the viceroys, having no country house, pass the warm season at that of the archbishop, in Tacubaya.

Even the manufacture of cigars, in which more than five thousand persons are employed, is a modern and magnificent edifice. The tribunal of *la Acordada* was one of the most terrible in the viceroyalty; the judge, who is called captain of the holy brotherhood, being also inspector of prohibited liquors. Nor was there any appeal till it was ordered in our time, by Charles III. that the viceroy, with two or three judges, should revise the sentences. The judge of the *Acordada* has from eight to ten thousand men throughout the viceroyalty, under the name of lieutenants, corporals, and troopers, many being desirous to enlist on account of the privileges. The judge is a lay brother, but has assessors. The holy brotherhood was established in imitation of that of Spain, known to every reader of *Don Quixote*, on account of the many robberies and murders which were formerly committed; and this vigilant police maintains the public tranquillity of the city and of the viceroyalty, speedily chastising every excess, and performing their rounds day and

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night. Capital criminals are hanged in a field called Exido de Concha, from the name of a captain of this brotherhood; and the tribunal has become more useful, since the viceroy obtained the privilege of reviewing sentences of death.

The *baratillo*, or market for trifling and second-hand commodities, is a square of shops, conceived and executed by Don Domingo de Trespalacios, when he was superintendant of the city, an office not described. The *coliseo*, or theatre, is small but handsome; the actors, commonly from Spain, are not the best, but superior to any native performers. Smoking is permitted, except when the viceroy or his lady is present; the women, who smoke like the men, diverting themselves with throwing the ends of cigars at the opposite boxes. The spectators are sometimes enthusiastic in favour of certain actresses: not many years ago, in a fit of this kind, while an European actress was repeating a favourite passage, *onzas* of gold were thrown upon the stage, to the amount of three thousand dollars, or about seven hundred English guineas; a proof of Mexican wealth, or rather extravagance.*

Mexico has imitated Madrid in the recent example of greater cleanliness. Not long ago this city was not lighted, nor the streets, nor even the foot paths paved. All this is now executed with such neatness and propriety, that, according to our author, Mexico may rival any European capital. Sewers and water courses are opened in the greater part of the streets, which are well paved; the foot paths being raised above the streets, to carry off the water. The market places are also cleansed, and there are many scavengers and carts to carry off the filth. The taste of the Mexicans is also improved in their carriages and liveries, which were formerly heavy, rude, and grotesque; coachmen being sometimes seen with only one boot, and the other leg even naked, while the coaches had curtains on each side instead of doors. At present they are more neat and convenient, and some equipages are even brought from England, though at an immense expence. Yet the population is laudably not consumed in lacquies and domestics; and a white coachman would be a wonder, all the servants being mulattoes, or other mingled

* The theatre has however greatly declined since it has been governed by a society, the dancing being the best part of the exhibition.

breeds.

breeds. But the fashion of riding is universal, and the number of horses prodigious.

Mexico presents several beautiful public walks, a rarity in the cities of Spanish America, where many have failed, as Thiery observes, from the trees having been planted; while the climate and seasons demand that they should have been raised from seed sown on the spot. The *alameda* is however hardly to be rivalled by any city of Spain, being an oblong square, inclosed with a neat railing of wood painted green, while in the middle there is a large fountain, and others on the sides. The foot passengers enter by four doors in the angles, and the coaches going to the promenade of Bucareli (a celebrated viceroy 1772—1779) pass on one side, but may also make a tour within. This promenade of Bucareli extends from the arches of Chapultepec to the prison of the Acoradada, there being in the middle a spacious square with a fountain; but the coaches can only pass around, as a return on the same road is not permitted. It is very little frequented by foot passengers. The mall of Ixtacalco, called also the *Viga*, made by the Count de Galvez, is one of the most pleasing, as it runs by the side of the canal which goes to that place, and conveys many canoes laden with eatables, tiles, lime, &c. for the city, the rowers being often crowned with roses, but the nearest part is now filled up." The promenade of Guadalupe was begun by the Count's father, who was also viceroy. There is also a causey from Mexico to Guadalupe, made by orders of Don Domingo de Trespalcios, because the road was hardly passable in the rainy season.

Water is introduced into Mexico by two aqueducts, neatly constructed of brick; one by the Trafsana, the water coming from Santa Fe; the other by the arches of Chapultepec, coming from a village of the same name. There is however no great abundance of good water; and the rich order it from various places in the neighbourhood.

The most splendid festivals of the Mexicans are the procession of Corpus Christi, and the entrance of a new viceroy. On the former are displayed all the luxury and pomp of the capital, particularly in ecclesiastic wealth and ornaments. Formerly the Indians used to erect canopies of branches, herbs, and flowers, more agreeable to the eye than

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those of linen since substituted. The streets are so wide as to admit of large scaffolds, where the spectators pay for their seats. In some processions men appear armed like Cortez and the conquerors. Sometimes, as Thierry observes, there are gigantic figures of pasteboard, twenty feet in height, representing people of various nations, forming ridiculous dances: at Vera Cruz, when the sacrament is carried to the sick, a state coach is used, drawn by four mules on a line, and lighted by four lanterns, while the consecrated wafer is in a nich behind, and a priest sits before to drive away the flies. There is a guard of four soldiers, and the whole gawdy equipage is followed by music and crowds of people.

The entrance of a new viceroy is a magnificent spectacle. He proceeds on horseback through the chief streets to the cathedral, where he is received by the archbishop at the head of the chapter: if he die, his obsequies are performed with much pomp. Another chief solemnity is the 13th of August, the anniversary of the conquest, when the standard of Cortez is displayed with great parade, and accompanied by the viceroy. The publication of the bulls of indulgence is another grand festival. The viceroy and his lady are always drawn by six mules, and at a very slow pace. A courier from Spain generally arrives once a month, and on his arrival all the bells are rung, so as to deafen the inhabitants; and on the following day the viceroy and royal audience always celebrate a solemn mass.

Though the climate of Mexico be in general falubrious, yet there are some prevalent, and even epidemic diseases. Many years ago there was a calenture, or fever, called *matlofagua*, of which the patients died in a few hours. The small pox is dangerous, but only occurs at stated periods of ten, fifteen, or twenty years. About 1782 there was an epidemic disorder which destroyed from twenty-five to twenty-seven thousand persons, the daily number being a hundred and sixty, or more, so that a new cemetery became necessary, as the churchyards could not contain the dead. Great charity was shewn on this occasion; and the very streets were loaded with victuals, drink, cloaths, and medicines, so that on opening the door the sick found all they wanted. Aromatic woods were burnt during the night, and all possible precautions employed.

ployed. In the year 1797, the dead in the precincts of the city amounted CITIES. to twelve thousand two hundred and twenty-one, while in general the number is not half so great; an indication that it is doubled by the small pox, which generally comes with some vessel, and chiefly attacks the wild Indians, though the citizens likewise suffer, because they had not, when our author wrote in 1798, adopted the salutary practice of inoculation. But so rapid is now the progress of scientific discovery, that it is believed the Jennerian antidote is not unknown in Mexico.* Apoplexies and epileptic diseases are not uncommon. That Manichean disease, which seems the work of an evil principle, and which attacks the sources of pleasure and generation, is common; but is softened by the benignity of the climate, though it sometimes pass into leprosy, a disorder pretty general, as is that called St. Anthony's fire. Pulmonary diseases are not uncommon, nor spotted fevers and pleurisies; but the most universal disease of men and women is that called *flado*, or the wind, presenting almost incredible symptoms; the patients appear as if they were demoniac or frantic; in one day, nay sometimes in one hour, they are excessively hot or cold; they laugh, they weep, and have such strong convulsions, that they appear to be possessed. This disease seems to proceed from the hot and unhealthy regimen, and from the abuse of tobacco, destructive alike of the nerves and the stomach. Consumption is unknown, but Europeans are subject to fatal disorders of the bowels. The black vomit, also called the yellow fever, is scarcely known in the city of Mexico; and the American † physicians have indeed recently ascertained, that it never extends its ravages beyond the sea coast. It is not uncommon at Vera Cruz, where, says our author, many by way of antidote take brandy at eleven o'clock; and he adds, that it is curable if taken in time. Agues are pretty frequent, and the patients of Vera Cruz go to Xalapa, a healthy town, celebrated for its jalap, and for the fair there held on the arrival of the fleets.

The property of individual citizens is often great, but of late begins to be smaller, and diffused among a greater number. There are,

* Our author adds, that this disease is mortal to the savages; and that when the Spaniards were at Pensacola, he was assured by a captain that the English had sent infected blankets to destroy indigineous tribes. This seems a mere extravagance of national hatred.

† Or Columbian, for an appellation is wanted for the people and country of the United States. Some prefer Freeland and Freelanders, as Finland, &c.

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however, many *mayorazgos*, or entailed estates, founded by the conquerors, from ten to sixty thousand dollars a year, but the chief that remain are the products of commerce and of the mines. The first Count of Regla founded three entailed estates, his earldom, and two marquises for two sons; while the two others had each a property of more than seven hundred thousand dollars. The house of Terranova, here styled the estate and marquise of Valle, of which the founder was Cortez, appoints and pays a complete tribunal, consisting of a governor and an assessor, who is a judge of the royal audience; the salary of the governor being five thousand dollars; whence some judgment may be formed of the wealth of this family.

Within these twenty years the number of *pulquerias*, or houses that sell pulque, is greatly increased. They are commonly slight wooden buildings, open on three sides, and shut on the other, in which is the door of the chamber where the liquor is kept. By an order of Trespalacios, who introduced many regulations into the police, they are only open from ten in the morning till four in the afternoon; but men and women being mingled, there are still quarrels, and sometimes murders.

From the best information which he could procure, Estalla computes the population of Mexico at one hundred and forty thousand souls, which equals that of Dublin; but the city, to judge from the extreme wideness of the streets, must be far larger. Yet it is probable that the population is greater, as there is considerable difficulty in ascertaining that of the Indians, whose interest it is to conceal themselves.

There being no money of bullion, as in Spain, the shopkeepers issue tokens of copper, iron, or wood, which pass all over the neighbourhood; and even grains of cacao pass as small coin. The shops that sell eatables are called *pulperias*; those which sell old cloaths *mestizas*; and those which sell European articles *caxones*: in the latter may be found all kind of European and Asiatic goods, but iron wares are sold apart.

In 1796 a statue of Charles IV. was erected in the great square, with much ceremony. The ground was raised four feet and a half, and supported by a wall of the hard stone of Culhuacan, in an elliptic form, the longest diameter being one hundred and thirty-six yards, and paved with square tiles in compartments of stone: but our author is minutely tedious in describing this enclosure, with its gates, medallions, and pious

inscriptions. Suffice it to add, that the base is of black stone of Culhuacan, surmounted by the leaden coloured stone of Chiluca, diversified with white marble and the rose coloured stone of Sincotel; the height of the pedestal being seven yards. The king is represented on horseback in the Roman dress; and this statue, which seems to be truly magnificent, is regarded as the noblest work in Spanish America. About the same time the viceroy Branciforte ordered new works to carry off the waters. The rains of 1795 were so abundant and continual, that the river of Quantitlan inundated the possessions of several villages and farmers, with great damage; and breaking through in various parts, threw itself into the lakes of Zumpango and St. Christoval; whence, and by the accidents at Pachuca, the inundation lasted from the middle of July to the end of the rainy season, the water passing from these lakes to that of Tezcucó, on which the city stands, which became as it were one sea with that of Zumpango, whence the danger of Mexico may be conceived. The judge superintendant of the drains, Don Cosme de Mier y Trespalacios displayed great activity and zeal on this occasion; and even by personal exertions contributed to the preservation of the capital; and to provide against similar danger in the ensuing year, he resolved to drain, at least in part, the lakes of Zumpango and St. Christoval, by a subterraneous passage to the river of Huehuetoco, so as also to effect a diminution of the lake of Tezcucó, at far less expence than was formerly calculated. The designs were examined by the engineers and magistrates; but it was thought preferable to open a channel from St. Christoval, that it might pass by the point of Vertederos. But as this design required time, the lake of Zumpango was drained into the river, so as not to flow into that of St. Christoval, which was the chief danger. This drain was actually cut in less than a month; a proof of the former indolence of the Mexicans.

There are useful regulations to guard against accidents by fire, and any consequent tumults; and the markets are not only more secure, but now yield their revenue to the city of twenty-four thousand eight hundred dollars, instead of the former twelve thousand five hundred.²⁸ The water pipes have been enlarged; and ten public fountains have been built, with

²⁸ Estalla, xxvii. 198.

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cocks instead of cisterns as before, whence there are more economy and purity, the cisterns having been exposed to all kinds of filth. Among other recent improvements, the price of bread, instead of being arbitrary as formerly, is regulated every four months, according to the price of grain; the bakers being obliged to declare the quantities in their shops, and the farmers those that they have sold.* The foot paths have been guarded with little pillars, to prevent any danger from the horses or carriages. The pavement is well executed, and kept in good repair, with a covered water course or sewer in the middle of the streets; and the city is well lighted, as the lamps are large and of the reflecting kind. At the corner of each street there is a *sereno*, a kind of watchman, who cleans and supplies the lamps, and at the same time guards the houses and passengers. Nightly rounds are also performed by the various municipal troops. The inns, or public houses, called *mesones*, are however mean, and little correspond with the luxury in cloaths, eating, and equipages, of which the number is prodigious. Our author concludes his interesting account of this singular and celebrated capital, with the information that great quantities of rum are now distilled from the refuse of the numerous sugar mills; the spirit, which is called *chinquirito*, and cane brandy, being as good as the best of Catalonia. This new product yields a revenue which promises soon to rival that from the pulque.

Having thus, it is hoped, given a sufficiently ample description of this capital, whose recent state was little known in geography, the whole shall be closed with some account of the environs. The surrounding mountains, as already mentioned, are crowned with cedars, and other majestic trees, and with many rare and beautiful shrubs. On the mountains, as in the valley, there are handsome villages, villas, and farms; and the fruits of Europe are mingled with those of the country. Verdant fields present numerous herds of cattle, while the rivers and lakes increase the fertility; so that the most exquisite fruits, and other products of the garden, abound through the whole year. Turkeys, geese, poultry, quails, and many kinds of fish, contribute to the food of the capital; nor are there wanting birds of exquisite song or beautiful

* *Estalla*, xxvii. 247.

plumage.

plumage. Agriculture boasts of flax, hemp, cotton, tobacco, indigo, Cities. sugar, and magueys. The eastern shore of the lake, as already mentioned, alone presents the aspect of sterility, on account of the salt vapours from the lake.²⁰

Among the chief resorts of the citizens may be named San Angel and San Augustin de las Cuevas, the last in particular being equal to the most delicious spot in Spain. The most celebrated sanctuary is that of our lady of Guadalupe, the history of which miraculous image is printed for the use of the devout. There is a college, with an abbot, canons, and prebendaries; the church being a regular building, with a nave and two aisles; the grating of the choir is of massy silver, and the other decorations of corresponding opulence. In the neighbourhood is a well which yields petroleum. Another sanctuary, or pilgrimage, is that of our lady de los Remedios, on the spot where Cortez retired when he was repulsed from Mexico, on what is called the *noche triste*, or melancholy night. Water was brought to the sanctuary by Trespalacios, a general benefactor, who constructed many bridges in the neighbourhood of the capital, appeased two tumults of Indians, and was a liberal donor to the hospitals. He first undertook the work of the drains, completed in 1797 by his nephew, dean of the royal audience; so that at present, at the expence of some millions, the lake, as already mentioned, is confined to the distance of a Spanish league from the capital, which it can no longer inundate. Without the barrier of Santiago is the sanctuary of our lady of the angels, formerly the residence of a hermit. Near that barrier is seen a picture, representing a pious law of Cortez, that the dilatory Indians should be whipped to the mass; an inconsistency worthy of his period and country.²¹

At the distance of five leagues from Mexico is the desert of the Carmelites, in an inclosure of about a league in circuit, the retreat of the more austere monks there being in solitary cells, as in the desert of Batuecas, in Spain. From one of the heights is discovered all the valley of Toluca, nay the whole plain of Mexico, ninety Spanish leagues in cir-

²⁰ Estalla, xxvi. 255.

²¹ Ibid. xxvi. 329.

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cumference. This desert abounds with various trees, of which the wood is much esteemed; wild rocks and flowery shrubs."

The aqueduct of Chapultepec adorns the immediate environs; and on the hill so called was a palace of Motezuma. Trespasa is another place of resort, where there are several good houses; and many settle there, as the air is esteemed very healthy. On the side of San Lazaro, about half a league from Mexico, is the Rock of the Baths, which are warm, but the quality is not ascertained.

Vera Cruz.

There are many other flourishing cities in this wide empire. In a commercial point of view the most interesting are Vera Cruz and Acapulco, the two chief ports; the first on the Atlantic, the second on the Pacific ocean. M. Thiery passed a considerable time at Vera Cruz in 1777, and describes it as situated in a sandy and barren plain, with infectious marshes on the south." It fronts the sea in a semicircle, and is inclosed with a simple wall or parapet, six feet high, and three broad, surmounted by a wooden palisade in great decay. This wall is flanked with six feeble bastions, or square towers, twelve feet in height. On the shore to the S. E. and N. W. are two redoubts, with some cannon to defend the port, which is bad and intricate. The houses are of good masonry in stone and lime, with wooden balconies, which have induced some careless travellers to report that the houses themselves are of wood. The rough stone used consists of petrified madrepores; but a good free stone is brought from Campechy. Many houses belonging to *mayorazgos*, or entailed estates, have fallen down from the want of repairs. The streets are wide, well paved with pebbles, and kept in excellent order. The churches abound in decorations of silver, while in the houses the chief luxury consists of porcelain and other Chinese articles. The principal inhabitants are merchants, but European commerce is chiefly conducted at Xalapa. The population is about seven or eight thousand; the inhabitants are generally proud, indolent, and devout; but commerce is well understood, and there are seven or eight houses each worth a million of dollars. The women are rarely handsome, and

" Eßalla, xvii. 70. See also Gage, who gives an enchanting description of this spot.

" Thiery, ii. 1.

live very retired; the only amusements being a coffee house, and processions, or religious masquerades, the penitents whipping themselves with much bloodshed. A charity of six thousand dollars to marry four poor girls has, as usual, passed to the rich. Opposite Vera Cruz, at the distance of four hundred fathom, is an islet, on which stands the castle of St. John d' Ulloa, which is tolerably fortified with three hundred pieces of cannon, the weakest part being the south-east: signals are made from a high tower. From forty to sixty ships of war, or a hundred merchantmen, might anchor from four to ten fathom; but the northerly winds are terrible, and often drive vessels on shore. In the rainy season the marshes on the south are haunted by caymans, or alligators, from seven to eight feet in length, but innocent. The sea-fowl and other birds are innumerable, and seem sometimes to darken the air; and the musquitos are very troublesome. It need scarcely be added that Vera Cruz is regarded as the only haven in the gulf of Mexico; but one has been recently discovered in the province of Santander, and that of Campechy is not contemptible. Estalla informs us, that the north winds are so furious, that the ladies are excused from going to mass; and these gales sometimes load the walls with sand.* In the rainy season the water regularly falls in the night; while at Mexico it is in the afternoon. Some religious women are occupied in teaching grammar to the parrots of Alvarado, reputed the best of all America. Earthquakes are frequent; and one in 1780 shook the house of the governor. Old Vera Cruz is an unhealthy situation, and the river is full of caymans, so strong as to draw an ox under water. They are fond of the flesh of dogs; but these sagacious animals bark aloud, and the caymans hasten to the spot, they then speedily ascend the river, and swim across, knowing that their enemies can with difficulty swim against the current.

The other grand port of the Mexican empire is Acapulco, the chief mart of the trade with the Philippines, which the Spanish writers often call that with China. When the galleon or Chinese ship arrives, the merchants at Mexico hasten to receive their commodities; but at other times the town is little frequented or peopled, being in a hot and wet climate, and the S. E. winds in the rainy season are singularly destruc-

* Estalla, xxvii. 28.

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tive, while the salutary north winds of the eastern shore are totally unknown; hence Acapulco is scarcely inhabited by any Spanish families, while there are about four hundred families of Chinese, that is, people from the Philippines, mulattoes and negroes.¹⁷ Even provisions are scarce; and the city depends on a supply from the Indians. At the distance of a musquet shot stands, on a promontory, the castle of San Diego, with thirty-one pieces of cannon, the greater part twenty-four pounders, to defend the haven, which is safe, and so spacious as to contain five hundred ships, the chief entrance being on the south. The governor has the title of lieutenant-general of the coast of the South Sea; and there are three companies of militia, the Chinese, the Mulatto, and the Negro. The district produces cotton, maiz, pot herbs, and fruits, with some tobacco; nor is there a deficiency of cattle or sheep.

Such are the two chief ports of New Spain; and before passing to the other principal towns, it may not be improper briefly to consider those in the central and more celebrated provinces of Tlascalla, Mexico,* and Mechoacan.

Puebla.

Puebla de los Angeles is regarded as the most populous city after Mexico, the number of souls being not less than sixty thousand, while Queretaro, the next, falls to forty-six thousand. Puebla is in a warm and dry climate, and one of the most beautiful cities in America, the churches being sumptuous, the streets broad and regular, with large squares and handsome houses.¹⁸ It is unnecessary to add that there are many convents, and twelve nunneries. There are also two colleges, and a charity school for girls. The last enumeration bore fifteen thousand families of Spaniards, Creols, and Mulattoes, with three thousand two hundred of Mexican Indians; but a considerable increase has lately taken place in this and other parts of the viceroyalty. There are several manufactures of soap, cotton cloths, fine earthen ware, and many kinds of iron work, particularly swords, bayonets, &c. celebrated for their

¹⁷ Estalla, xxvi. 332.

* Toluca and Lerma are reckoned among the cities of the archbishopric; and Tezcuco and Xochimilco are cities of the Indians. Estalla, xxvi. 252. who adds, that the chief sea ports are Acapulco and Panuco; Vera Cruz being in the bishopric of Puebla. But the port of Panuco is impeded by a bank of sand.

¹⁸ Estalla, xxvii. 44.

temper and beauty. The soap is noted even in Spain, the wash-balls being in imitation of many animals and fruits of the country. In the market much cotton is sold by the Indians, the buyers weighing it and pronouncing the price: but the seller repeats the process till he finds he can get no more, when he returns and sells it to the first. The sagacity of the Indians was here evidenced: a Spaniard having stolen a horse, was brought before the judge by the Indian owner, who having no proof in his favour, suddenly threw his cloak over the head of the animal, and asked the Spaniard of which eye he was blind. The robber, taken by surprise, and not to shew a short acquaintance with the horse, answered, of the right eye; but the Indian answered, "of neither;" which being found to be the fact, his horse was restored. The ancient town of Tlascala still enjoys many of its former privileges, though reduced to about five hundred families, chiefly employed in weaving cotton. In the neighbourhood is the plain of Otumba, celebrated for a victory of Cortez, whose allies were the people of Tlascala and the Otomite Indians.*

Cordova is a considerable town, the chief trade being in sugar, of which there are thirty-three mills. Estalla says there are two hundred and sixty families of Spaniards, one hundred and twenty-six of *mestizos*, or descendants of Spaniards and Indians, sixty of Mulattoes and Negroes, and two hundred and seventy-three of Mexican Indians.²⁷ Thierry describes Cordova as a large town, with numerous domes, towers, and steeples, and a large square in the centre, with Gothic arcades on three sides, the cathedral filling the fourth, and a fountain of delicious water in the middle: the streets are wide, straight, and paved, and the houses mostly of stone; but the inhabitants are indolent, for where nature does much for man he does nothing for her.²⁸ The situation is in a kind of natural passage towards the province of Mexico; the vegetation being extremely rich and beautiful, on a soil of red clay, from ten to

* The celebrated historian Solis, whose facts however are not always exact, describes Tlascala as a mountainous province, at the beginning of the grand ridge, by which they communicated with the Otomites their allies. The volcano of Popocatepec, on its eruption in the time of Cortez, was explored by Ordaz; and the sulphur was used to make gunpowder. Charles V. rewarded Ordaz, and gave him for arms a volcano. Estalla, xxvii. 39.

²⁷ Estalla, xxvii. 83.

²⁸ Thierry, ii. 68.

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Orizava.

fifteen feet in depth, producing all the fruits of the two hemispheres. At the distance of seven Spanish leagues, or twenty-eight English miles, stands the town of Orizava, in a country of such rich pasturage, that in the space of a square league our traveller counted eleven flocks, each of more than six hundred sheep.⁹ The town is about fifteen hundred fathoms in length, and five hundred in breadth, with wide, neat, and well paved streets; though such is the power of vegetation, that grass springs in the streets, while the waters are as pure as crystal. Population, three thousand whites, and fifteen hundred Indians and Negroes; there being tanneries and some manufactures of coarse cloth. Here the caravans and mules repose, and the value of inland and European articles is estimated. It is in a vale, surrounded with detached mountains, overshadowed with the most verdant forests; above which proudly rises on the W. the volcano of Orizava, covered with perpetual snow. The house of the Carmelites is of barbaric magnificence. The neighbourhood produces a great quantity of tobacco. Orizava is on the high road between Vera Cruz and Mexico, being, according to Alcedo, forty-six leagues to the east of the capital, while he estimates Vera Cruz at eighty-four leagues, and only one minute of latitude further to the south.

Xalapa.

Xalapa is another considerable town in this fertile part of the viceroyalty, formerly famous for the fair held on the arrival of the stated fleets from Europe; and even since the commerce has been declared free, it remains a considerable mart for European commodities. It stands on the southern skirts of a mountain, in a beautiful climate, the soil being clay, and in parts stoney, while pure waters issue from a white sand, and fertilize the country. The population is two hundred and forty-three Spanish families, a hundred and eighty-two Mestizos, and three hundred and sixty one Indians. When north winds prevail at Vera Cruz, it always rains at Xalapa; but the climate is esteemed very healthy. There is a regular inn, and a still better at Perote, a day's journey nearer the capital; but the new road passes by Cordova, Orizava, and Puebla. The purging powder of the country is made of the root of a plant to which the town gives the name of jalap.

⁹ Thiery, ii. 71.

Not to mention Pachuca, eighteen leagues on the north east of Mexico, CITIES. formerly famous for its mines, now inundated, nor Mexitlan, forty leagues to the E. N. E. near the Sierra Madre, or mother chain of mountains, the city of Queretaro, on the N. W. deserves notice. It is seated Queretaro. in the country of the Otomite Indians, who were conquered by the Spaniards in 1531.* Queretaro is said to be one of the most beautiful and opulent cities of the viceroyalty, and the most extensive after Mexico; the situation being in a delicious vale, watered by a river, which is divided into numerous channels, and conveyed into two thousand gardens, producing all the fruits and flowers of Europe and America. From three grand squares proceed numerous streets towards the four cardinal points of the compass; and there is a celebrated aqueduct, supported by more than forty arches, of the height of thirty-five yards, which cost one hundred and fourteen thousand dollars. The aqueducts in general are the most beautiful objects of architecture in New Spain. The parochial church is magnificent, and the curacy one of the richest in the viceroyalty. Another church is so sumptuously adorned, that the altar is of massy silver. There are three thousand families of Spaniards, Mestizos, and Mulattoes, and about as many of Otomite Indians; so that the population is computed at forty-seven thousand souls, among which are many rich and noble families. The manufactures are fine cloths, woollen stuffs, coarse linens; and the shops are very numerous, nor are the tanneries without reputation. This charming city is forty-two leagues distant from Mexico.

Puebla and Queretaro may thus be regarded as the two chief cities after Mexico; and they are succeeded by Guadalaxara and Guatemala, seats Guadalaxara. of two royal audiences. Guadalaxara is more extensive than populous, containing from eight to nine thousand families of Spaniards, Mestizos, and Mulattoes; nor can the Indians be included, as they live in farms and villages. There are eight squares, many convents as usual, and two colleges for education. The Royal Audience was established in 1548. Guadalaxara stands on the river Barnaja, or Esquitlan, which flows from the lake of Mechoacan, and runs rapidly to the north-west; there being a great cataract at the distance of four leagues. The plain of

* Estalla, xxvii. 107. who frequently copies Alcedo.

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Guadalaxara is likewise watered with many rivulets, and surrounded with hills, overshadowed with pines and oaks. The city boasts of excellent artificers, and the people are generally fair and well formed, and celebrated for industry and honesty. There is here also a handsome aqueduct, and numerous gardens replenished with excellent fruits. According to the memoirs of Trespalacios, used by Estalla, the daughters of black and white parents are here entirely white, not mulattoes, as in the other provinces. The streets are unpaved, and the carriages drawn by unshod mules, fed with maize, which costs four reals the bushel. There are frequent tempests, but it never snows; and when, by way of phenomenon, a shower fell, the inhabitants imagined that the end of the world was come; and the like superstition was shewn at Mexico a few years ago, on the appearance of an aurora borealis.

Guatemala.

Guatemala, the seat of the third Royal Audience, was founded by the name of St. Jago, at the side of a volcano, and was totally ruined by an earthquake, 1775, but has been rebuilt at some distance. Of the new city the accounts are very imperfect, though a gazette be there published, which contains curious articles on antiquities and natural history.⁴¹ The president of the kingdom of Guatemala, which contains many ample provinces, as above explained, is commander in chief, but subordinate to the viceroy of Mexico. The royal audience, or high court of justice, was established in 1544, and in 1742 this city became an archiepiscopal see. It is probable that the churches and convents have not been forgotten; and there is an university which begins to adopt the useful plans of education. The inhabitants are celebrated for personal beauty, and sweetness of disposition, the women being reputed the handsomest in Spanish America, probably owing to the moisture of the climate. The number of inhabitants has not been ascertained, nor even mentioned by any writer, but is probably equal, if not superior, to that of Guadalaxara.

Such are some of the principal cities of this extensive empire, but there are a few others remarkable as capitals of provinces, or from their

⁴¹ According to Mr. Arrowsmith's map of the West Indies, New Guatemala stands about 25 g. miles farther to the south, on the river Vacca, near the Barra de Itapa of D' Anville, now called the harbour of Guatemala.

positions,

positions, which it may be proper briefly to describe, in order to present a more complete idea of a country so little known to the European reader. A short progress shall therefore be made from the southern to the northern extremities.

The capital of the province of Veragua is a city of the same name, Veragua, also called St. Jago, as being under the protection of St. James. This is a small town tolerably situated, in a warm and moist climate, abounding in maiz, yucca a root of which bread is made, plantains, and cattle, but principally in swine.* The natives dye their cotton of a rich and permanent purple, with the juice of a sea snail found on the coast of the Pacific, akin to the murex of the ancients; with which, and some gold from their mines, they carry on trade with Panama, and the provinces of the kingdom of Guatemala. There is an elegant hospital; and fourteen villages are subject to the jurisdiction of this town, which is ruled by a governor. This province, as already mentioned, is one of the three which composed the kingdom of Tierra Firme, the political arrangement having, as in the Russian empire, set aside the geographical, for it is by all the Spanish writers allowed to belong to North America. It is a rugged country, full of inaccessible mountains, abounding however with excellent and beautiful woods, and the pastures of the vales are extremely rich. There are beautiful little monies, buff colour, with a white crown, but so delicate, that they soon die if carried the smallest distance from their native clime. It may be said to rain every day in the year, and often with terrible thunder and lightning, while from the mountains on the north descend rapid and dangerous torrents. The gold mines are opulent, the best being styled that of Guerrero, having been discovered by a person so called, but they are little worked, because every article must be carried on the shoulders of the Indians over the precipitous mountains. The great Colon, who discovered this country in 1503, was created duke of Veragua. The Doraces, and other savage tribes, live naked in the mountains, on roots and fruits; but many began to be converted in 1760 by the Franciscans, who have founded some Indian villages.

* Alcedo in voce.

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Cartago.

The capital of Costarica, the most southern province of the kingdom of Guatemala, is Cartago, now a miserable place without any trade. This province has several mines of gold and silver, whence the name; and the chocolate is excellent. There is a large port, or rather small bay, on the Pacific, that of Nicoya, or the gulf de las Salinas, noted for the pearl fishery, and for the shell fish which dies purple; while on the Atlantic is the port called that of Cartago, though at a great distance from the town.

Leon.

Leon is the capital of the extensive province of Nicaragua, situated on a large lake of fresh water, abounding with fish. It is a bishopric, but a town of little importance. Granada * is another little town, on the great lake of Nicaragua. Both were pillaged by the buccancers of America towards the end of the seventeenth century. Realejo is a small entrenched town, with an excellent port, serving Leon the capital.

The northern provinces, in the centre, present no remarkable towns, the shores being loaded with shoals, which impede navigation and commerce. Campechy, in Yucatan, possesses nevertheless a tolerable haven, defended by three forts, and not a little frequented. The town is small, with two or three churches and convents; chief trade dying woods, wax, and cottons. Truxillo, in Honduras, also deserves mention.

Chiapa.

Ciudad Real is the capital of Chiapa, and a bishopric, with a beautiful cathedral, three convents, and a nunnery. The trade chocolate, cotton, wool, sugar, and the precious cochineal, a peculiar product, which does not seem to extend much further to the south. The population is insignificant, but many families pretend to great antiquity. The women were accustomed to take chocolate in the church, till the bishop issued his excommunication against this practice.

The city of Guatemala has been already described. Among the small districts forming what is called the province of Guatemala in the maps, the chief town of Soconusco is Gueguetan. Sonsonate contains about one thousand nine hundred souls, fourteen hundred being Spanish. Near

* Erroneously called Nicaragua in our maps, while there is no town of that name.

it are three volcanoes, and the high ridge of Apaneca, running many leagues E. and W.

The town of Oaxaca, formerly called Guaxaca and Antequera, the capital of the province of the same name, is celebrated for abundant harvests of cochineal. M. Thiery, who visited this city in 1777, describes the situation as truly magnificent, at the opening of three large plains, one of which, according to our author, extends to the town of Guatemala, a prodigious distance. It is watered by a beautiful river, while on the N. E. several aqueducts bring pure and abundant waters from the mountains. The air is clear and healthy, being refreshed in the morning by the east wind, and by the west in the evening. His thermometer, that of Bourbon, was at 16° above the freezing point in the morning, and 22° at noon. This was towards the end of the month of May; but he adds, that the climate presented a perpetual spring, though in the latitude of 20° : he should have said $17^{\circ} 30'$, but according to Alcedo $18^{\circ} 2'$. In fine, adds Thiery, magnificence of situation, artificial beauty, excellence of soil, temperature of the climate, abundance of fruits of Europe and America in constant succession—nothing but superior industry is wanting to render Oaxaca an enchanting city. The interior corresponds with the numerous spires and domes, which give a majestic appearance. The form is an oblong square, about sixteen hundred fathom by one thousand, (nearly two miles by one and a quarter,) including the suburbs, which are full of gardens, and of *nopaleries*, that is, plantations of *nopals*, a kind of cactus, which feeds the cochineal insect. The streets are wide and straight, well paved; and the houses, of two floors, are built of free stone. The town house in the great square, a recent erection, is built with a stone of a sea-green colour. The bishop's house and the cathedral form two other sides of the same square, surrounded with arcades, as usual in Spanish towns, an useful practice against the rain and the sun. The other churches and monasteries, which are numerous, are solidly built, and richly decorated. There is a bishop and provincial governor subordinate to the governor of Guatemala, to which audience the province belongs.* Our author adds, that the population, comprising Indians, Mulattoes, and Negroes, is about

* Thiery, i. 126.

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fix thousand souls; but he has certainly mistaken the Spanish computation, which is by families: and Alcedo informs us, that there are fix thousand families; and that in 1766 there were more than twenty thousand communicants, but many were probably from the country. Supposing four persons in a family, the number would be twenty-four thousand. The province of Oaxaca is esteemed the most fertile of the whole kingdom of Guatemala, and, besides cochineal, produces an abundance of excellent chocolate. There are manufactures of black wax; and the kernels of a fruit are ingeniously painted with miniatures. This celebrated city is however subject to earthquakes, and suffered considerably during the last that happened in New Spain.*

Tehuacan.

Tehuacan, or according to some Teguacan, is a pleasant town between Oaxaca and Orizava. It is seated in a delightful vale, near a river of the same name, called also Rio Grande, of a nitrous quality, and so petrifying a nature, that the shores resemble ruinous walls. There are four churches; and the streets, squares, and houses are neat and modern. The chief market is of wheat, which is excellent, and the pomgranates are highly esteemed. Besides numerous families of Spaniards and Mulattoes, there are about two thousand and eighty Indians. M. Thiery approached this town on his journey to Oaxaca; and says there are two wheat harvests, one in May, the other in September.

Pasquaro.

After passing the central provinces, of which the chief towns have been already described, we arrive at Mechoacan, or rather Valladolid, a considerable town, but without beauty or trade, there being only five hundred families of Spaniards and Mulattoes. The cathedral, begun in 1738, is of the Tuscan order. But the city of Utzila Pasquaro is the capital of the province, and seat of the governor. This city, more briefly named Pasquaro, is nine leagues to the S. W. of Valladolid, in a pleasant situation to the south of a great lake, twelve leagues, or forty-eight B. miles in circumference, studded with pleasant isles, and so abundant in fish, as to supply in part the city of Mexico. The population is

* Among the products of the province are named by Estalla sugar, cotton, rice, chocolate, plantains, cochineal, cassia; there are mines of gold, silver, lead, and crystal; and most of the rivers roll particles of gold. xxvii. 93. He at the same time expresses his regret at the want of industry in the inhabitants.

five hundred families of Spaniards and Mulattoes, and two thousand families of Indians, chiefly occupied in sugar mills, and in the copper mines which are in the vicinity. CITIES.

Zacatecas, the capital of a district formerly celebrated for the richest mines of New Spain, has declined with these mines, and Guanajuato, about a hundred and forty B. miles to the S. E. has become the chief seat of mineral wealth. Zacatecas contained about twelve thousand families of Spaniards and mingled breeds, though consisting chiefly of one street, in a deep passage between high rocks crowned with cottages. San Luis de Potosi on the S. E. is said by Alcedo to contain only sixteen hundred families of Spaniards, Mulattoes, and Indians, though it have six magnificent churches. San Luis. The ridge of St. Peter, five leagues from the city, contained rich mines of gold and silver, but they are now in part exhausted, and the fuel has become scarce. The opulence of this city has in course declined, and the chief trade is in goat skins and tanned leather. Guanajuato has not profited by this decline, being merely a mining station, between the two capital towns of Guadalaxara and Queretaro.

The furthest town of any note, towards the north, is Durango, more remarkable for the extent of the bishopric than for its population, which only consists of five thousand in all, even comprising the companies of militia to defend it against the Indians, still almost the sole inhabitants of the kingdom of New Biscay, of which it is the capital. Durango. The climate is benign and healthy, and the soil extremely fruitful in wheat, maiz, and fruits, while the pastures abound with excellent cattle. There are four convents and three churches, one of them on a hill without the city. There is here an office of the royal treasury, to collect the duties on the numerous mines in New Biscay. The bishopric was founded in 1620, and is of a prodigious extent, over the whole provinces of New Biscay, that is, Tepeguana, Taramara, Topia, Batopilas, Culiacan, Cinaloa, Ostimuri, Sonora, Pimeria.

It has already been mentioned, that the northern provinces cannot be said to be peopled by the Spaniards, who have merely established religious missions among the savages. Stations. The garrison of Arispe, in Sonora, is the

the

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Santa Fe.

the residence of the commander in chief of the northern provinces.* Even Santa Fe, the capital of New Mexico, is rather a village than a town, but deserves description on account of its singular and remote position, being computed by the Spanish authors at the distance of six hundred leagues, two thousand four hundred B. miles to the N. of the capital city of Mexico. It was founded in 1682, on the skirts of a high chain of mountains, giving birth to a clear river abounding in excellent trout. This river issues from a lake formed by numerous springs on the summit of the mountain, and passes through the middle of the town, which, in lat. 36°, has a climate resembling Spain, with seasonable rain and snow; the spring being mild, while the summer heats mature cotton in abundance. The population consists of three hundred Spanish families; the Indians of that district having no desire to live in the same town with their masters. The surrounding territory is clear of woods, fertile and pleasant, producing wheat, maiz, garden plants, fruits, and particularly grapes, of which esteemed wines are made. The pastures are well watered, and well replenished with horses, cattle, and sheep: the Rio Bravo spreads fertility around, rising, it is said, fifty leagues to the N. W. of the capital, and its margins are adorned with beautiful woods, while the stream abounds with excellent fish. The neighbouring mountains are clothed with tall barren pines, and with a smaller sort, which bears large cones; the other trees are oaks of different kinds, sapines, and others, which form excellent timber. The animals are deer, bears, wolves, foxes, wild sheep, and particularly stags of the size of a mule, of which the horns, according to our author, are not less than two yards in length, probably the moose deer. There are mines of tin, which however do not defray the expence of working. The province is infested by a tribe of savages called Cumanches.†

In the province of Texas, which properly forms part of Louisiana, a station or two may deserve notice. The garrison of San Antonio de Bejar is regarded as the capital of the province of Texas, also ridiculously

* Antillon, 43.

† The savages on the west of New Mexico are the Seris (who also possess the isle of Tiburon), the Moquis, and Apaches; on the east the Lipanes and Cumanches. Antillon, p. 41.

called

called the New Philippines. It was founded in 1731, consisting of a captain, a lieutenant, and one company of soldiers. The station of Ceniz, which Alcedo positively ascribes to Louisiana, is now a mere Indian village, with the ruins of a fort built by the French. That called Natchitoches, from an Indian tribe, friends of the French, and enemies of the Spaniards, was a small fort, built in an island of the Red River by some French veterans. But the station of Adayes, or Adaes, is regarded by the Spanish writers themselves as the extreme fortress in this quarter: it is seated in a fertile country, at the distance of two leagues from a lake of the same name, which abounds in fish. In the middle of the lake, in front of the garrison, there is a hill, or rock, of a pyramidal form, more than one hundred yards in circumference, the stone of which it is composed resembling crystal in its reflection of the solar rays, and it is at the same time the highest in the district. In some parts this lake is five leagues in diameter, and may be ten in circumference, with a gulf which may be navigated by large vessels, and could not be sounded with a rope of one hundred and eighty fathoms.* The vicinity abounds in wild cattle, bears, and beavers; and the soil is fertile in maize and other grain. The garrison used to consist of a captain, with a company of fifty-seven men.

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Edifices.

The chief edifices are the cathedrals, churches, and convents, as may be expected where the clergy are so predominant, that civil architecture, and civil affairs, are almost entirely neglected. The cathedral of Mexico is regarded as the most splendid. It is of great size, divided into five naves or avenues, three open for the processions, and two containing chapels and altars; the length being four hundred geometrical feet, and the breadth one hundred and ninety-five, with one hundred and sixty-four windows.† The building commenced in 1573, and was completed in 1667, costing one million seven hundred and fifty-two thousand dollars: in 1743 it was adorned with a beautiful altar by Balbas. The choir is decorated with four pulpits, or rather galleries, joined by a railing of what our author styles Chinese metal, probably tutenague,‡ covered with

* This lake is unknown in all the maps, as is also that of St. Ann, if not the same.

† Estalla, xxvi. 271.

‡ In another place, 282, he calls it a kind of tambac.

small

EDIFICES. small lamps: at great solemnities the illumination is magnificent, and reflected by numerous ornaments of massy silver.

Roads. No canal appears to have been executed in the Mexican empire. Even the roads remained in a state of complete neglect; and the new highway from Vera Cruz to Mexico is regarded by Estalla as such a surprising effort, that he has described it at great length, and even repeated his description, of which a part shall be here translated.* It was, says he, a disgrace to the Spanish nation, that, at the end of two centuries and a half, this road continued to be as neglected as at the time of the conquest, full of dangers and embarrassments, and a thousand inconveniences. At length, about 1796, an active and intelligent viceroy, Branciforte, undertook this great design; and the road was begun to be conducted by Puebla de los Angeles, Cordova, and Orizava. The distance is about eighty American leagues, each league of five thousand *varas* of Castille, so that the eighty leagues amount to fifty of those measured and marked on the high roads of Spain.* During this distance, the caravans of mules wasted twenty-two days in the dry season, and during the rains not less than thirty-five days were employed, so as greatly to enhance the value of commodities, a mule's load from Vera Cruz to Mexico costing eleven dollars. Three quarters of the road are plain, and proper for carriages, while the rest is mountainous, so that no carriage could be employed; and the expence of bringing a new coach from Vera Cruz to the capital was not less than three hundred dollars. In all this space there is only one large river to pass, and a bridge might be easily constructed. The number of mule loads is about sixty thousand annually, and the expence is prodigious where large articles cannot be transported; while, on

* Viagero, xxvi. 361, 369, 27, 64, 211.

* From this striking passage it appears that the Spanish American league is to that of Spain as eighty to fifty, which would make a prodigious difference in the calculations; but as Estalla, in the parts merely geographical, generally copies Alcedo, who wrote in Spain, and surely uses the Spanish league, it is probable that the calculations are in that measure. By the maps, the direct distance between Vera Cruz and Mexico is two hundred and forty-five B. miles, to which adding one-eighth for the winding of a road, the distance will be about two hundred and eighty B. miles, or seventy Spanish leagues, such as are measured on the highways, and examined by Dutens in the neighbourhood of Madrid. But as the maps of New Spain are totally inaccurate, no reliance can be placed on them.

a good road, waggons might perform the journey in seven or eight days. Roads.
 On the ancient road the inns were miserable, the only beds being a kind of tables, as in a barrack, and the traveller was obliged to bring all his provisions. From Vera Cruz to Perote large litters were used; while from Perote to Mexico carriages were employed.* According to the last information which Estalla could procure; in 1798, the new road from Mexico to Vera Cruz was already extended to Puebla, and might compare in breadth, level, and bridges with the best in Europe. It is to be hoped that it is now completed—a wonderful exertion, when we consider the numerous roads in the territory of the United States, who have ordered a good carriage-way from Philadelphia to New Orleans, a distance of one thousand miles!

The manufactures of New Spain are not of much consequence. Manufactures
 Coarse cottons form the universal dress of the Indians. There are many tanneries, but the leather is far from being equal to the Spanish; and the same observation will apply to the glass and earthen ware, although the materials be excellent.† A cheap periodical publication, describing the arts, machines, and discoveries in the manufactures and agriculture, would be of singular utility. In Guadalaxara they make earthen jars of a sweet scent, which are brought even to Spain, where they are sometimes eaten by the caprice of the women. In the city of Queretaro there are various manufactures of cloth, some esteemed superior to those of Spain, and the soldiers are accustomed to keep their uniforms, as a splendid dress on their return to the parent country. The hams of Toluca, twelve leagues S. W. from Mexico, are highly esteemed. In Puebla there are forty-three manufactures of woollen cloth, but the dearest is only six reals a yard. There are also potteries and glass houses, and one thousand two hundred and twenty-two looms for veils, mantles, and other articles of fine cotton, some mixed with silk. In the province of Oaxaca there are only two manufactures of indigo, and five hundred and seven looms employed in weaving cottons. Valladolid has thirty-four manufactures of wool and cotton, while Potofi has only one, and

* M. Thierry says, that the only inns to the southward are the *Casas Reales*, or royal houses, so called because they serve as courts of justice, while in the night they afford a miserable lodging for travellers.

† Estalla, xxvi. 345, 27, 201.

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Zacatecas none. In the district of Guanajuato there are a great number of looms for woollens, the dearest being nine reals a yard. The manner of weaving appears to be as simple as in Hindostan, yet the war having embarrassed the importation of European articles, they were imitated with considerable success, and even blond lace has been carried to great perfection. The manufacture of plate is carried on to a great extent. Silk is found wild in the province of Oaxaca. The cochineal, a rich article, belongs to agriculture.

Commerce.

The commerce of New Spain is of great extent and importance, and has recently undergone considerable improvements, which deserve illustration. The Chinese ship, so called because it came from the Philippines, used to arrive yearly at Acapulco, and was an object of prey to the English marine in time of war. While Estalla loudly accuses us of insatiable ambition, he ought rather to have said avarice, to which justice has often been sacrificed in a Spanish war. The recent monarchs, Charles III. and his successor, the reigning sovereign, have exerted themselves so beneficially in favour of the American colonies, that more has been done during the last and present reign, than for the whole preceding period. The liberty of commerce, and the new system of sub-delegation, have already produced such advantages as to overcome the weak declamations of those interested in the ancient monopoly, and the disorders of the political and commercial establishments. America was formerly regarded merely as a country of mines; but now all the other branches of industry are cultivated, and the commerce is greatly increased since the year 1778, when greater freedom began to be introduced. At first, however, the merchants, seeing that they could no longer make such exorbitant gains, withdrew their stock, and laid it out in farms, mines, and mortgages, leaving trade to new speculators of smaller capital, but of greater information, and who had not been corrupted by excessive profits gained without any risk. The new men were contented with moderate advantages, and did not aspire to found *mayorazgos*, or entailed estates, or other establishments of equal utility to society. Thus two advantages arose from the liberty of commerce: industrious individuals and the general mass were enriched, while the great capitals of the former monopolists returned to support agriculture

and the mines. The number of shops has been greatly increased. The COMMERCE. imports have also augmented, so that at Vera Cruz alone they amounted, in 1792, to fourteen millions twenty-three thousand eight hundred and eighty-nine dollars. Our author proceeds to explain the beneficial effects of the new system upon agriculture, which he proves by the increase of the tythes; and upon the mines by the increased quantity of the coinage; both which effects are large and apparent. The duties also testify the rise of trade, upon a medium of thirteen years, compared with thirteen preceding the change; the advantage in favour of the former being more than fourteen millions of dollars. The merchants are no longer subject to the monopolists of the capital, but proceed directly to Vera Cruz to buy their commodities; and thus also avoid a duty of six per cent. payable on entering the metropolis. Several small expences are also avoided; and there being a greater concurrence of buyers, the goods are not only more speedily sold, but being imported in greater abundance, the prices are considerably reduced.

From various calculations, which need not here be repeated, the advantages of the new system are demonstrated, in various important points of view; and if the parent country find greater difficulty in raising occasional loans, it is because the capitals are dispersed in many hands, instead of being confined in a few, who often employed them in expensive foundations of religious colleges or convents. Yet there are many merchants who can disburse twenty or thirty thousand dollars, without any impediment; and they who can advance smaller sums are innumerable, though formerly there were none of this last class, all being dependent upon the monopolists. Hence also a greater appearance of ease among the middle classes, and even the poor; while, under the ancient system, the overgrown wealth of a few individuals led them to extravagant and capricious luxury, and the most useless and improper waste of their revenues. The greater diffusion of wealth appears from many circumstances. Formerly many tickets of the lottery remained in the treasury; at present all are sold, because many can afford to buy. The theatre of the capital, which only used to yield four thousand pesos, in 1792 cleared twelve thousand three hundred and six. In 1791 a theatre was opened at Vera Cruz, and one has also been erected in the city of Queretaro.

COMMERCE.

Estalla, as already mentioned, computes the whole inhabitants of New Spain, or in other words, the Spanish dominions in North America, at three millions and a half; hence, says he, as the imports are between thirteen and fourteen millions of pesos, it will be seen that each person does not consume above four pesos, though many of the articles, as silks, linens, fine woollen cloths, iron and steel, be of the first necessity. The importations would be more considerable, if the merchants studied the change of fashions, and the general taste, which may in part be learned from the description already given of the manners and customs. For example, the *panos de rebozo*, a kind of veils, are so indispensable to the women of New Spain, that they are of the first consumption. Even the nuns wear them; and the most distinguished ladies, as well as the poorest women in the market, use the *rebozo*, as a mantle, as a cloak, as a shawl, in the street, in the chamber, and in bed; it is thrown over the shoulder, over the head, over the face, or around the waist. They are of silk, or silk and cotton, about three yards and a half long, and one broad; but some two yards and a half by three quarters and a half: many are entirely of cotton, some mingled with silk, some bordered with gold and silver; but the most valued are bordered with gold, silver, and silk, and are prized according to fineness and pattern. Those of Puebla sell from ten to fifty pesos the dozen; but those of Sultepeque and Temascaltepeque cost at least five dollars each; nay, one may cost fifty dollars, according to the fineness and quality of the web, and elegance of the border. The common class wear coarse *rebozo's*, not worth importation; but the finest, says our author, would be a valuable article, as labour is far cheaper in Spain. Saddles and spurs are also in great demand, horses being so cheap and common; ploughshares, and other iron articles, and mining utensils, iron for wheels, &c. will also find a speedy sale. Our author recommends the establishment of commercial schools as an essential object. Commerce would also be augmented, if an abuse which has already been remedied in the capital were banished from the provinces. The workmen gain high wages, labour being very dear; but instead of wearing decent cloathing, they are indecently naked, and employing few days in labour, waste the rest in drunkenness. Yet this defect chiefly arose from the want of constant occupation, in part proceeding

ing from the former system of regular fleets. But the government re- COMMERCE.
 taining a part of the salary for the purchase of cloaths, the workmen in
 the various royal manufactures and offices were obliged to adopt greater
 decency, though formerly accustomed to appear naked even in the
 cathedral.

In another part of his work Estalla gives additional informations on
 this important subject. The commerce of the viceroyalty may be re-
 garded under five distinct heads; that with China, or rather the Philip-
 pine Islands, that with Peru, the West Indies, Spain, and the interior
 of the viceroyalty."

The first consists solely in the ship, which arrives yearly with five
 hundred thousand pesos of capital, at prime cost, in the Philippines, but
 worth at least double the sum in New Spain. The greater part of the
 cargo is in silks, printed cottons or chintzes, wax, porcelain, and other
 small articles. If delayed by storms or accidents, the cargo is doubled
 in the following year. This trade had declined, but is now re-esta-
 blished; and the last ship was computed at two millions of dollars, though
 the printed goods of Catalonia begin to supplant those of Asia. The
 company of the Philippines at Cadiz remitted to Vera Cruz in 1790,
 1791, and 1792, goods of those islands to the amount of more than four
 hundred and fifty thousand pesos, so as to impede the market of those
 brought to Acapulco: and this new plan may probably supplant the
 ancient, especially in the domain of Guatemala, and the northern coast,
 separated from Acapulco by a great distance of miserable roads. From
 this account it will appear, that, when Estalla wrote, a free trade was not
 established between New Spain and the Philippines, though some writers
 have asserted that such a regulation had long before taken place.

The trade with Peru, also conducted at Acapulco, is considerably de-
 cayed, now consisting chiefly in chocolate, from Guayaquil, to the
 amount of about three hundred thousand pesos, which are remitted in
 money.

That with the West Indies is of greater importance; the principal ar-
 ticle of trade with Havanna was wax, but it has declined; in return were
 sent leather, soap, cotton, but chiefly grain.

" Estalla, xxvii. 206.

COMMERCE.

The trade with Spain is the best regulated. The imports, as already mentioned, amount to about fourteen millions of dollars, while the exports are computed at three millions and a half; the residue of metals, which do not enter the royal treasury, being computed at five millions; while a large sum is paid for various offices, the maintenance of the army, and of manufactures, a part being of course employed in the purchase of Spanish goods, of which the consumpt is greatly increased; but the one half of the import is thought to be in brandies. The chief article acquired from strangers is linen, of which there is no important manufacture in Spain: in 1793 this branch amounted, in what are called *bretanas*, from Brittany, in France, to one million, five hundred and ninety-five thousand, five hundred and fifteen pesos; and other linen goods to one million, seven hundred and seven thousand, eight hundred and forty pesos; thus exceeding in value all the other foreign articles, which in that year amounted to five millions, three hundred and seventy-eight thousand, seven hundred and forty-two pesos.

The interior trade has hitherto been very insignificant, because there are neither canals nor good roads.

Our author adds, that advantages may be expected from the new spirit of discovery, the ships called *Sutil* and *Mexicana*, after having evinced that there was no passage between the Pacific and the Atlantic, in a second voyage, 1793, explored a great part of the N. W. coast of America; and another expedition was planned in 1794, to examine the coasts of Sonsonate and Tehuantepec, in the southern centre of the vice-royalty, which nevertheless remain almost unknown to Spanish indolence.

Coinage.

The coinage and dollars of New Spain are well known through the whole commercial world. It now amounts, as already observed, to twenty-six millions of pesos, while it was formerly about eighteen millions. That of all the Spanish dominions of South America, according to Helms, does not exceed ten millions, whence the far superior opulence of New Spain is easily perceivable.

CHAPTER IV.

NATURAL GEOGRAPHY.

Climate and Seasons.—Face of the Country.—Soil and Agriculture.—Rivers.—Lakes.—Mountains.—Forests.—Botany.—Zoology.—Mineralogy.—Mineral Waters.—Natural Curiosities.

THE climate of this interesting country is singularly diversified, between the tropical seasons and rains, and the temperature of the southern and even middle countries of Europe. Moisture seems to predominate in the Isthmus, but not to such a degree as in the South American province of Darien, where it may be said to rain for nine months of the year. The rains, however, temper the extreme heat, which would otherwise be intolerable in this climate. Violent storms are not unfrequent; and sometimes the lightning seems to rise from the ground.¹ The maritime districts of Mexico are, however, hot and unhealthy, so as to occasion much perspiration even in January.² The inland mountains, on the contrary, will sometimes present white frost and ice in the dog days. In other inland provinces the climate is mild and benign, with some momentary snow in winter, but no artificial warmth is found necessary, and animals sleep all the year under the open sky. There are plentiful rains, generally after mid-day, from April till September; and hail storms are not unknown. Thunder is frequent, and the earthquakes and volcanoes are additional circumstances of terror.³

CLIMATE.

¹ D'Aueroche.² Clavigero, i. 11. He was himself a native of Vera Cruz.³ The climate of California is mild but foggy, and the soil remarkably fertile. La Perouse, ii. 203. Even northern California, as far as Monterey, is by his account singularly productive of maize, barley, and pease. Careii, vi. 35. Fr. tr. says there are three harvests in Mexico, in June, October, and the *aventurera*, or accidental one, upon the mountains.

The province of Cinaloa is very dry, but well watered by rivers. On the coast it scarcely rains four or five times in the year, and the weather is very warm, except in December and January, when the cold is extreme. Estalla, xxvii. 127. The chief mining station there is Sivirijoa. Ib. 130.

It

CLIMATE.

It has already been seen that the climate of the capital, though by the best accounts in the latitude of $19^{\circ} 25'$, differs greatly from that of the parts of Asia and Africa which are under the same parallel. This difference seems chiefly to arise from the superior height of the ground, a new observation in geography. Humboldt found that the vale of Mexico is about 6960 feet above the level of the sea, and that even the inland plains are generally as high as mount Vesuvius, or about 3600 feet. Such standards have hitherto been applied only to mountains; and one of the last improvements of the science is their applications to plains and valleys. This superior elevation of course tempers the climate with a greater mixture of cold. Yet in the parts to the north of Guadalupe, where the high chain of Topia runs north from the neighbourhood of that city, for a space of a hundred and fifty leagues, or about six hundred English miles, as far as New Mexico, the rains are continual the whole day, from the month of June to September; and in the province of Tabasco the rains are perpetual for nine months of the year.* The southern coasts are equally affected; while, as climate depends more upon elevation and depression, than upon imaginary zones, the interior of the country presents surprising varieties and unexpected singularities. Nor can it be regarded as unhealthy, as the aborigines sometimes attain a great age; and grey hairs, baldness, or wrinkles, are unknown till a very late period of life. But though they be exempted from paying tribute after the age of sixty, yet they can rarely count the years of their existence, and they cannot always be traced in the parish registers.† In the year 1779 there was living in the jurisdiction of San Juan de los Llanos, an Indian, who had a son aged between a hundred and twelve and a hundred and twenty, a grandson aged ninety, and what is equally surprising, a son about nine years of age. It was proposed to bring him to the capital, but as the change of diet and climate might have been fatal, he was left in his parish, where unhappily there were no registers at the time of his birth. This, with other instances, may serve to evince, that the prejudices of some philosophers (for philosophers have their prejudices) against the climate and productions of America, are unfounded. If there be any where a marked inferiority in every respect, of climate, men, animals,

* Estalla, xxvii. 102, 188.

† Ibid. xxvi. 342.

and vegetables, it is in Africa, a most ancient part of the ancient world, CLIMATE. that it must be fought.

The climate has generally a ruling influence over the diseases of a country. Some hints have already been given concerning those of the capital. The yellow fever, or what is called the black vomit, has been repeatedly, during the last century, one of the most fatal maladies; but the physicians of the United States have certified, that this pestilence is confined to sea ports, and never passes inland. The Spaniards have observed, that the use of salted provisions is noxious, and renders the contagion more easy; but the chief preventative is extreme cleanliness in the streets and quays, and the removal of all offensive accumulations.

The general appearance of these extensive regions is at once singular and greatly diversified. When M. Thierry had passed the ridge of Orizava, proceeding towards the south, he found that nature assumed quite a new aspect, Face of the Country.

Groves of new pomp, and Meads of other flowers;

the vegetable decoration being of surprising beauty.* Rare geraniums, heliotropes, tradescantias, &c. appeared under the yuccas, a kind of aloes thirty feet in height, while the most numerous plant was the maguey, of equal singularity and utility. The highways are bordered with hedges of the sensitive plant. Further on he found superb *bignonias*, with yellow flowers, from sixty to one hundred feet in height, while the sides of the hills were covered with a beautiful *cactus*, of the nature of what we call Indian figs, forming a curious ornament of the landscape. From a trunk of fifteen or sixteen feet in height, and five or six in circumference, spring straight branches, which are crowned by a series of others, regularly diverging like the branches of a chandelier, so as sometimes to fill a circumference of forty or fifty feet in diameter, and equal height, thus resembling a large chandelier of a sea-green colour. The fruit, which is wholesome, discloses when ripe a crimson pulp; but the fall of the leaves, resembling beams full of thorns, is dangerous to the passenger. The pitahahas, a smaller species of these plants, affords a delicious fruit, the common food of the Indians. Grand ridges of mountains, numerous volcanoes, some of them covered with perpetual snow, precipices

* M. Thierry, i. 75, 93.

FACE OF THE COUNTRY. and cataracts worthy of the pencil of Rosa, delicious vales, fertile plains, picturesque lakes and rivers, romantic cities and villages, an union of the trees and vegetables of Europe and America, contribute to diversify this interesting country.

Soil. The soil is often a deep clay, of surprising fertility, and requiring no manure save irrigation. Though the population be, as we have seen, extremely thin, yet agriculture has of late years made considerable progress, at least in the eyes of Spanish authors. Since greater freedom has been granted to commerce, many of the rich monopolists have employed

Agriculture. their funds in the cultivation of land. The progress may partly be judged from the state of the tythes, which in the archbishopric of Mexico, for ten years, from 1769 to 1779, amounted to four millions, one hundred and thirty-two thousand, six hundred and thirty pesos; while for the ten years, from 1779 to 1789, they rose to seven millions, eighty-two thousand, eight hundred and seventy-nine pesos; the difference being two millions, nine hundred and fifty thousand, two hundred and forty-nine pesos, or more than half of the former proceeds.* A similar difference, though not so great, appears in the bishoprics of Puebla, Oaxaca, Guadalaxara, and Durango, which, with Valladolid, embrace the whole viceroyalty of Mexico, strictly considered, Guatemala being regarded as a distinct kingdom. The tythes stand thus:

Archbishopric of Mexico	-	7,082,879
Bishopric of Puebla	-	3,239,400
Oaxaca	-	863,287
Guadalaxara	-	2,579,108
Durango	-	1,080,313
		14,844,987

Our author has omitted the valuation of Valladolid, but if we suppose the whole tythes to amount to sixteen millions of pesos in ten years, we have, at the same time, a rough calculation of the value of agricultural

* Estalla, xxvii. 9. but p. 10. he says the difference is 4,996,664.

products, which, including the kingdom of Guatemala, may very probably amount to the yearly sum of twenty millions.*

AGRICUL-
TURE.

Near Guadalaxara is the celebrated estate of the marquis of Altamira, about forty leagues in extent, which sends annually to Mexico between three and four thousand beeves. It is also very productive of wheat, pimento, &c. with numerous flocks of sheep and swine; but markets are wanting. The estate however might yield forty thousand pesos a year.[†]

The product of cotton might be greatly increased, there being a superabundance of land proper for that purpose. Flax and hemp are neglected, because other products present greater gains, more ease, and security. Of indigo there are annually exported one thousand five hundred *arrobas*, and eight thousand quintals of pimento. The cultivation of sugar is greatly increased, and the augmentation of the price in Europe has rendered the trade considerable. Tobacco was introduced in 1765, and has become a most important branch. Vineyards form a new object of great promise. The celebrated cochineal is rather an object of horticulture, and requires considerable attention. The plant is a peculiar species of cactus, called nopal, and the insect is peculiar to the plant, being very small, and enveloped in a white film; but when crushed, the beautiful carmine or crimson appears. The propagation of this plant, which is about eight feet in height, is performed by branches, but for a long journey the roots alone can be trusted.‡ The insect is dried before it becomes an article of commerce; and the annual exports are computed by Estalla at twenty-three thousand six hundred *arrobas*. By another computation the quantity of cochineal exported to Spain is four hundred and sixty thousand pounds, costing in New Spain about twelve shillings a pound, and yielding at Cadiz about thirteen or fourteen shillings.*

* Our author adds, that in the ten last years agriculture, and the stores of cattle, sheep, and swine, have increased nine times; and the total increase of agriculture, during the last epoch, is of the value of 49,966,640 pesos in the sole article of tythes. How is this to be understood? It is in fact the difference of the tythes (p. 10), multiplied by ten, which gives the advance of the estimate of agriculture in general during ten years, not that of the tythes.

† Estalla, xxvii. 102.

‡ See the curious work of M. Thiery on the culture of the nopal, which accompanies his journey to Oaxaca.

* Thiery, lxx.

AGRICULTURE.

The people employed in this culture are computed between twenty-five and thirty thousand; and the value of the trade, to the province of Oaxaca, is reckoned one million of pesos, but the cultivator does not gain above nine per cent.

The division of land is far more unequal than in Spain itself; there being estates equal in extent to provinces or small kingdoms; but this circumstance is not so detrimental as it would prove in Europe, the Indians being very slothful, and shewing little spirit in cultivation. They are encouraged to form villages by liberal grants of land, but there are few who avail themselves of this favour, and they are fond of speedier gains, as cutting woods, making charcoal, &c. an indelible effect of their character and manner of thinking, for with them to-day is all, and to-morrow nothing. Our author however concludes, that the produce of many articles has been tripled within these few years, such as indigo, cotton, pimento of Tabasco, and above all, the precious cochineal; while tillage, and the rearing of herds and flocks, has been far more universally diffused.

Rivers.

Rio Bravo.

The principal river of Spanish North America is, beyond all comparison, the Rio Bravo, called also del Norte, or of the northern star. The course of this important river, so far as its sources can yet be conjectured, may be about 1000 B. miles; for its whole circuit probably exceeds that of the Danube. The nature of the shores, and the various appearances and qualities of the waters, have not been illustrated. The learned and industrious Alcedo only informs us, that it divides the province of Coaguila from that of Texas, which last is in fact a part of the ancient Louisiana.* Between the Rio Bravo and the Mississippi the chief rivers are the Medina, the Magdalena, or river of Guadalupe, that of Flores, the Arcokifas, and Chicowanah. By the Spanish survey of the Gulf of Mexico, republished at Paris 1801, it appears that the Arcokifas ends in

Medina, &c.

* The source of the Rio Bravo is laid down in Antillon's map, from information procured in the year 1779, where the governor of New Mexico, De Anza, made an expedition against the savages called Cumanches; and on the 23d of August was at 38° 50'; when the savages informed him that the river rose fifteen leagues to the N. W. in the ridge called Grullas, which belongs to the easterly chain, in the neighbourhood of Santa Fe. The source is in a morass, which not only abounds in springs, but is fed by the constant dissolution of snow from adjacent volcanoes. Antillon, p. 44.

a noble bay, called Calveston, which is unknown to Alcedo. The river RIVERS.
 Mexicano, near which the settlement of Adayes is commonly placed, does not appear in this chart, the name being supplanted by that of Mermentas, while the Chicowansh of Arrowsmith is the river De Nieves of the Spaniards. But there is no small uncertainty and change in the nomenclature of these rivers, Louisiana having been little explored by the Spaniards, who regarded it as a frontier desert between their colonies and those settled by the English. The chief rivers however appear to be the Medina, dividing Coaguila from Texas; the Trinidad, or Flores of Arrowsmith, on which was a station called Genis; and the Mexicano, or Mermentas.

Towards the west is a large river, the Colorado, which flows into the Colorado.
 Vermillion sea, or gulf of California, also called by D'Anville *Colorado*, with the addition *de los Martyres*; while Gila is the *Rio Grande de los Apóstolos*—barbarous appellations imposed by the jesuits, who had settlements in California. The course of this river may be computed at 600 B. miles. This Rio Colorado, or Red River, is so called because the waters become of that colour owing to the rains falling upon a soil of red clay. It is a deep and copious stream, capable of considerable navigation.¹⁰ The neighbouring savages, called Cocomaricopas, are dextrous in swimming across, holding in the left hand a piece of wood, which supports their arms or burthen, and steering with the right, while the women, supported by a kind of petticoat of basket work, upon which they place their children, pass in like manner. The course of the Colorado is generally from N. E. to S. W. sometimes W. It is joined from the E. by a large river called Gila, which is however every Gila.
 where fordable. Of the Indian tribes in this quarter some accounts shall be given elsewhere. The country between these rivers is said to be an upland desert, without water or pasture. On the other side of the Colorado the country is said, on the contrary, to be very fertile, and the natives rather fond of cultivation. It is believed that considerable rivers also join the Colorado from the west; but if the Spaniards have explored that part of the country, they conceal their information.

¹⁰ Estalla, xxvii. 141.

RIVERS.

Hiaqui.

Pursuing thence a southern progress, the first important river which occurs is the Hiaqui, a large and fertile stream, which inundates the neighbouring provinces of Sonora and Oritumuri." Rising in the extensive province of Tauramara, it leaves or pervades the grand chain of mountains, running about one half of its course towards the N. W. after which it pursues the remainder towards the S. W. entering the Gulf of California at the village of Huiribis, where there is a secure harbour, the nearest to California, and whence provisions are generally conveyed to that peninsula. The banks produce abundant harvests of maiz, French beans, a kind of peas, and lentiles. The high ridge of Topia, already mentioned, also gives source to other considerable rivers, some of them passing into the Gulf of Mexico, while others join the Pacific, and which swell greatly on the melting of the snows, which sometimes impede the roads to the depth of two yards. There is also a high table land, as in the centre of Asia; and the three rivers, Nazas, Papasquiario, and Ahorcados, are lost in a large lake, probably the salt lake of D'Anville, being that of Parras in the map of Alzate, placed by Alcedo in the province of Tepeguana. These inland rivers are little known, but the Nazas, or Nafas, appears to be the chief stream; and Alcedo informs us, that the banks produce excellent grapes. Its course would seem to be about two hundred miles. The Papasquiario, so called from a settlement on its banks, joins the Nafas from the S. The capital town Durango also stands on an inland river, which is lost in a lake. This river seems to be the Guadiana (another name of Durango), or the Saucedo of D'Anville, who alone, of all geographers, has been careful to mark the names of rivers and mountains, the most important features of nature.

Barnaja.

On returning to the western coast there occurs a very considerable river, in some maps called St. Jago, or the Rio Grande, a name so often repeated as to signify nothing. Estalla more correctly calls it the river Barnaja, or Esquitlan, in which he follows Alcedo; and D'Anville had long since styled it the Barania. This river passes through the large lake of Chapala, but its course may be traced from a small lake not far from

" Estalla, xxvii. 131.

Mexico,

Mexico, whence it pursues a N. W. progress of about four hundred and fifty B. miles. RIVERS.

Nearly in the same latitude an important river, the Panuco, also deriving its source from a lake not far from the capital, flows into the gulf of Mexico; but this river, in the Spanish chart of the Bay of Biscay, is styled the Tampico, under which name it is described by Alcedo, who has omitted the district of Gualtecas, still retained in the maps. Panuco.

To the S. of the capital the land begins to be more confined, and the rivers become of course more inconsiderable. Yet the Zacatula approaches in length to the two latter; and the Yopez, which also joins the Pacific, deserves mention. On the other side the Alvarado, with the numerous divisions of its mouth, is a river of considerable importance. Alvarado. Alcedo informs us, that it springs from two fountains, one in the mountains of Zongolica, the other in those of Misteca, which join near Cuyotepec, and being enlarged by other rivers, it becomes a formidable stream, and joins the sea at the bar called after its name. The river Grijalva, so called from the name of the first discoverer, pervades the province of Tabasco. The Balleze of Yucatan was well known to the English baymen, or cutters of logwood. In that part of Honduras called the Musquito shore, the river called Yare is full of cataraets; it is called by the Spaniards the river Vankez. The river of St. Juan is remarkable for the proposed communication between the two seas, while others prefer the river Chagre, in the province of Panama, South America. This grand scheme shall be instantly considered in describing the lake of Nicaragua.

Before leaving this subject, regret may be expressed at the deficiencies of Mexican geography, the best maps being very imperfect in the delineation of rivers and mountains; and even the manuscript map by Humboldt, which the author saw at Paris, appeared little worthy of a geologist in this important respect.

The chief lake in Spanish North America, so far as yet explored, is that of Nicaragua, which is about 170 B. miles in length, N. W. to S. E. and about half that breadth. This grand lake is situated in the province of the same name, towards the south of the isthmus, and has a great outlet, the river of St. Juan, to the Gulf of Mexico; while a smaller stream Lakes.
Nicaragua.

LAKES.

stream is by some supposed to flow into the Pacific.* In the hands of an enterprising people this lake would supply the long wished for passage from the Atlantic into the Pacific, and in the most direct course that could be desired. Nature has already supplied half the means, and it is probable that a complete passage might have been opened, at half the expence wasted in fruitless expeditions to discover such a passage by the north-west or the north-east. This speculation must depend on circumstances; but if a passage were once opened, the force of the ocean would probably enlarge it; and a tribute at this new found would be a considerable source of revenue.

On this important subject, so sublimely interesting to commerce, an intelligent Frenchman addressed a memoir to the court of Spain, which he afterwards printed.† He observes, that this grand idea of joining the commerce of the West and East Indies had excited attention, even since the first discovery of America; and he proceeds, in three sections, to shew its possibility, its infinite utility, and the means to be employed. The canal of Languedoc, and even the labours of Peter the Great to render the Volga navigable, were of far superior difficulty to the present design; and he might now have added the canal in the north of Scotland, calculated to bear frigates. Three places have been proposed for opening a communication between the Atlantic and Pacific oceans. 1st, By the river Chagre, which is navigable to within five leagues of Panama; but the province is singularly unhealthy, and little adapted to trade or population. 2d, The river Chamalufon, in the gulf of Honduras, which might be united to form a canal from the Puerto de Cavallos to the bay of Fonseca.‡ These two points were examined by an engineer, sent by Philip II. according to the report of Herrera: the second

* This last seems doubtful or perhaps only exists during the inundations. Mr. Edwards, Hist. W. Ind. i. 18. quotes Dr. Dancer's History of the expedition from Jamaica to Fort Juan, on the lake of Nicaragua, 1780. This was printed in Jamaica, and is very rare in England. A copy has however been procured, but it throws little light on geography, treating solely of the diseases.

† *Memoire sur un nouveau passage de la mer du Nord à la mer du Sud par M. Martin de la Bastille*, Paris, 1791, 8vo, with a large coloured map. I do not know that it was ever sold. The copy was given to me by M. Demanne, who inherits the works of D'Anville. The answer of the Spanish court was, that circumstances did not permit the design.

‡ This is according to D'Anville's map, but by that of Arrowsmith it must be that of Morales to be joined with the Xeres.

was found impracticable; and it was alleged that the river Chagre was LAKES. dry when not fed by the rains. 3d, The river St. Juan, which, according to our author, is navigated by the Indians in all its course, and was reported in the reign of Charles V. to be as considerable as the Guadalquivir at Seville. M. de la Basside supposes that the lake of Nicaragua, at its S. W. point, communicates with a branch of the river Partido, which falls into the bay of Papagayo. In this he has used the materials employed by D'Anville, while by the recent maps of Faden and of Arrowsmith there is no such communication, but a passage must be cut from the N. W. angle of the lake to the gulf of Papagayo. Yet from the account of the city of Granada, there is no doubt that the climate is healthy, and the soil excellent; and the lake of Nicaragua, according to the respectable report of Alcedo,* is navigable for ships of the line. But this error has no weight in so grand a question, in which to open a few more miles, or even leagues, would not be an object worthy consideration. Alcedo also positively informs us, that the river of St. Juan is navigable for large ships throughout all its course, and a strong fortress has been erected to protect this navigation. Even if shallows were found they might be removed by the same means that were employed by Smeton in the river Clyde. On the other side the space to be cut, according to the best and most recent maps, would not exceed ten or twelve English miles, and might cost, to open a grand navigation, about two hundred thousand pounds sterling. Some have objected the numerous volcanoes, but they do not pour lava; and the direction of the canal might be regulated accordingly. The lake itself would also offer the inestimable advantages of a vast internal port, defendable by fortresses on both sides. If we examine the most recent maps, we shall find equal difficulties with the river Chagre; and a climate so unhealthy, that no establishments could be made. The other narrowest points are between the Golfo Dolce and Trinidad, which would require a canal of seventy miles, not to speak of the numerous shoals which impede the northern gulf: and the other point, to the north of the gulf of Teguan-tepec, would require a canal of more than one hundred miles; the choice therefore seems to remain between the Chagre, in a most unhealthy situa-

* This is confirmed by Estalla, xxvii. 180.

LAKES.

tion, which may be judged by the decline of Portobello, and the infinite advantages of the lake of Nicaragua.

Hitherto the remarks of M. de la Bastide have been little used, because his information is antiquated and inaccurate. Nor need we enter into his arguments for the infinite utility of this grand project to Spain and her colonies, not to speak of the whole commerce of Europe and of the United States, which would yield an ample subsidy at this new found. He proposes that it shall be executed by a company, to whom should be assigned extensive lands in the neighbourhood of the proposed works, with the fishery of the lake, and enjoyment of the duties for a limited time, and an exclusive commerce. Of his geographical knowledge little can be said; but his zeal is great, as may be judged by a supposed address of the other European nations to Spain, "We have wasted our treasures, we have abandoned our subjects to all sorts of dangers, either in long voyages to the East Indies, or in discovering a passage which might abridge their sufferings and diminish their dangers. A cruel witness of our cares, you make a secret of a discovery which would have ended them; nay more, when we demand of you the sure means of being delivered from these delays and calamities, you wrap yourself up in profound silence. Do you believe the exclusive ideas of the cabinet of Madrid will be perpetual laws to Europe? Do you not reflect that it would be more wise to become the dispenser of a benefit, of which the advantage will be confined to yourself, by the generous use which you have made of your power? Are you not apprehensive that justice, humanity, all the civilization and science of Europe, which would finally constrain you to adopt this sublime and beneficial design, will not be indignant against your refusal, and keep it in eternal remembrance? Do you wish, for the strange pleasure of renouncing the honour of being benefactors of the world, to expose yourself to its just reproaches, and even to justify its attempts to attack a possession, which in your hands is only stolen from the human race, and in any others would contribute to universal felicity?"

It may be added, that Estalla, in an intelligent and impartial manner, points out the infinite advantages of this grand project, and justly ridicules the idea that the waters of the Pacific are higher than those of the Atlantic.

Atlantic. But when he dwells on the difficulty of cutting the space re- LAKES.
quired, he shews little knowledge of modern mechanics: yet he justly
concludes that the obstacles are not known, that is, they are political,
and that the passage by the lake of Nicaragua would be far more easy and
advantageous in all respects than that by Panama. The same author
adds, that the lake of Nicaragua is remarkable for numerous farms on its
shores, abounding in horses and bees, each having a little port where
canoes and barks arrive, and load with great dispatch. There are several
picturesque islands, some of them volcanic.*

In the province of Yucatan there are many considerable lakes, well
known to the cutters of logwood; and still ascending towards the north,

* This is extracted from Alcedo, who adds, that the river St. Juan, which is about sixty league,
in length, (by the latest English maps it is about 100 B. miles,) is navigated by large flat bottomed
boats and canoes, laden with tallow and other effects, which they carry to Portobello, a distance
of eighty leagues; but they are obliged to unload at three places, probably rapids, where canals
would of course be required. At one of these the castle of our lady, called by the English the fort
St. Juan, is placed on a rock, and though small, strong enough to protect the entrance. There
are thirty-six cannons and a battery, whence the fort might easily be retaken. Level with the water
is a platform; and towards the land it is defended by a ditch and rampart, reaching to the river.
The usual garrison is one hundred men, besides sixteen of artillery, forty musqueteers, and twenty
militia; which last manage the barks, two being placed every night up and down the river. There
are eighteen slaves, male and female, for the service of the garrison, which is supplied with pro-
visions, flesh, fowls, garden stuff, maize, and other articles, from the city of Granada, at the dis-
tance of sixty leagues; and there are always provisions for six months. But he observes, that the
climate even here is unhealthy, as it rains almost perpetually; and every two years, or sooner, if de-
manded by the governor, there is recruited in the capital, Guatemala, a company of fifty men, to
replace those who die, the governor of the province being obliged in the meanwhile to send subli-
tutes. This violently contradicts what has been said of the comparative healthiness of the situation;
but as it is a plain, and not an alpine country like the isthmus of Panama, it is probable that by
thinning the woods, and draining the marshes, events naturally connected with the intended canal,
this evil might be remedied. Alcedo adds, that this fortress is regarded as the key of New Spain
and Peru; and by seizing it, and the port of Realejo, an enemy would become master of both
oceans. Bourgoing has shewn the advantages of the canal by Nicaragua.

From Dr. Dancer's pamphlet, p. 11, it appears that the river, at the latter end of the dry season
(10th March), contains little water, and is full of shoals and sandy beaches, which render the pas-
sage very difficult. The bite of the snakes is fatal, ib. 13. The fortress which was taken is con-
structed like a jail, so as to propagate contagion, 19; and the British troops were obliged to with-
draw by constant maladies, the country being overspread with woods and sinking marshes, and the
rains falling in torrents from April to October, with dreadful thunder storms. Ib. 23.

Upon the whole, this great design must be weighed on the spot by able engineers; and the only
general maxim is, that the farther to the north the more wholesome the climate. A canal by the
river Guazacoles to the gulf of Teguntepec, would, in this view, be preferable to one from the
Golfo Dulce, or the two others.

LAKES.
Tezcuco.

that of Mexico is the first that deserves attention. The conjunct lakes of Tezcuco and Chalco are found to be about thirty B. miles in length, while that of Tezcuco might be about fifteen miles in breadth; but now that the latter is partly drained, so as to be at the distance of a league from the city, it is probably about twelve miles in breadth. This lake is not only celebrated in history, as originally containing the city of Mexico, rising amid the waters like another Venice, and accessible only by caufies on the west side, but is remarkable for the qualities of the waters, partly fresh and partly saline. The Chalco, or fresh water lake on the south, appears to flow by a narrow channel into the salt lake of Tezcuco; but Mr. Humboldt's map of the environs of Mexico will, when published, explain this interesting part of topography.* There are three or four other smaller lakes, at the distance of about thirty miles from the capital, one of which gives source to the river Panuco, or rather Tampico, which falls into the gulf of Mexico, while another is the fountain of the river Barnaja, as already mentioned.

Mechoacan.

In the province of Mechoacan there are two considerable lakes, one of which gave name to the province implying *the fishery*, as it used anciently to supply the capital. This lake, as already mentioned, is on the north of Pasquaro, the capital of the province, while Valladolid, or Mechoacan, has only the bishopric; and, according to Alcedo, is about twelve leagues in circumference, probably about forty English miles, perhaps equaling that of Tezcuco, though represented in our maps as of far inferior size. The fish is still exquisite; and many Indians dwell in picturesque islets, occupied in fishing, or bringing to the capital in canoes fish, fruits, flowers, and pot-herbs.

To the west, in the province of New Galicia, is a yet more important lake, that of Chapala, according to Alcedo called also the sea of Chapala, on account of its extent. It is greatly navigated, and is full of fish, a valuable article of trade to the vicinity.

Parras.

The lake of Parras, or of St. Pedro, which receives the large river Nafas, is little known; but it is probably of far greater extent than that

* The lake of Tezcuco, or Mexico, according to Mr. Humboldt, is six thousand nine hundred and sixty feet above the level of the sea; and only contains two kinds of fish, one of which, the *axolotl*, belongs to the class of Sirenes and Proteés, and is of extraordinary organization.

assigned in the maps. To the west is another large lake, which receives LAKES. two rivers, one of them passing by Durango, but so imperfect is the geography, that the name is unknown. The latter lake, in the midst of silver mines, might be named that of Cuencami, from the nearest station. There are also numerous lakes in the province called New Leon.

In the province of Texas there is, according to the account of Alcedo, St. Anne. a large lake of fresh water, called that of St. Ann, perhaps that of Adayes, which is at least equally unknown in the maps. The lake of Adayes is so large as to be celebrated among the savages, being about five Adayes. leagues in diameter. The splendid rock in the middle has already been described, in speaking of the station of Adayes.

It must not be omitted, that the western coasts of the gulf of Mexico abound with numerous long lagoons, divided from the sea by sandy banks or long reefs, so as perfectly to resemble the *bays* on the Prussian shore of the Baltic; a coincidence probably owing to the similar operation of currents.

The chief chain of mountains in Spanish North America is that of Mountains. Topia, which commencing in the neighbourhood of Guadalaxara, extends north to New Mexico, a distance of one hundred and fifty leagues, Topia, or Sierra Madre. or, according to our maps, more than seven hundred B. miles; while the breadth of all the ridges is, by the same authority, sometimes forty leagues, or one hundred and sixty miles." This chain being computed from Guadalaxara, must of course be towards the west of the viceroyalty. It is of such a height as to be comparable with the Andes of Peru, and abounds with precipices of the most profound and terrible aspect. It is almost universally clothed with pines of extraordinary size and height, and so thick, as to exclude the rays of the sun. On the summit the cold is intense; but the temperature of the sides varies according to climate and exposure. It gives birth to many rivers, some flowing into the Atlantic, others to the Pacific, and subject to inundations on the melting of the snows, which are of great depth. The rains are continual from June to September, and the rivers become terrible, inundating the country to the distance of two or three leagues, while the musquitoes become intolerable. Besides pines there are various trees, and the wild fruit sustains numerous

" Alcedo in voce.

MOUNTAINS. birds of the most variegated and beautiful appearance. Other birds, called carpenters, make holes in the pines with surprising art, to conceal their food, and preserve it from putrefaction. There is also abundance of what our author calls *pavas*, or pea-hens, but the peacock seems a bird peculiar to Asia; and he evidently means the turkey, sometimes called by the same name in Spanish. His royal eagle is probably a bird of great size. Among the quadrupeds he enumerates bears, lions, and tygers; that is, the American animals which have been so named. The trees are also peopled with squirrels of various kinds, while the monkey loves a more southern climate. This noble chain is prolific in silver, yielding about a mark for each quintal of earth, which has tempted the Spaniards to explore those inaccessible recesses of nature, which defy all exaggeration. This ridge received its appellation from a savage tribe, which was converted by the jesuits in 1590; but the mines have been mostly abandoned, on account of their great distance from any capital. The ridge of Topia is also called the *Sierra Madre*, or mother chain, and embraces the singular province of Nayarit, which remained pagan till 1718, as already mentioned. Towards the north the extent of the Sierra Madre, or chain of Topia, has not been precisely determined; but the Moquis, on the west of Santa Fe, and under the same parallel, are positively classed among its inhabitants;" and it probably forms one chain with that of Nabajo, and the Sierra Azul, or Blue Ridge, of Alzate, and the Stony Mountains of N. W. America, sending off a branch called Gemes on the west of New Mexico, while on the east of that province is the inferior ridge of Namhi.* In the viceroyalty the general distance of the Topian chain from the western shore is about one hundred and forty B. miles, but in some parts not above half that space.

As this grand ridge, by the account of all the Spanish authors, begins in the neighbourhood of Guadalaxara, it is clear that it must not be confounded with the grand ridge of the Andes, an error of not a few theoretical geologists; nor can the Peruvian chain be properly traced into North America, especially beyond the lake of Nicaragua, where the ridges rather run E. and W.

" Edifalla, xxvii. 139.

* Various parts of this last chain are by Alzate called the Mountains of Sumas (on the Rio Bravo), Organos, St. Christoval, Abo, Chimayon, Taos, all S. to N.

On

On the east there is also a considerable chain, supporting an intermediate table land, on which are various rivers, terminating in lakes. This table land seems to proceed from the neighbourhood of the capital, and to include the whole of New Mexico, though pervaded by a powerful river, the Bravo, as not unexampled in the table lands of Hindostan, and other countries. But this eastern chain not having a general appellation, has been more laxly treated by the Spanish authors. Estalla informs us that all the extensive territory contained between the Pacific and Atlantic, is divided into three parts, formed by two principal chains of mountains, running from the south-east to the north-west.* On the east of the oriental chain are the provinces of New Leon, Santander, Coaguila, and Texas; not to mention more southern districts on the gulf of Mexico. In the middle division, between the chains, are various provinces of New Biscay, as Tepeguana, Tarmaura, Topia, and Batopilas, as far as the garrison of the *Paso del Norte*, which stands in the south of New Mexico; but he might, it is believed, have added that country itself. He adds that, on the west of the Topian chain, are the provinces of Culiacan, Cinaloa, Ostimuri, and Sonora, with upper and lower Pimeria, so called from the different elevation of the territory, thus confirming the idea that the western chain terminates in the neighbourhood of Guadalaxara. Hence it appears that the oriental ridge begins in the vicinity of Mexico, further to the south than that of Topia; and if either of the two chains could be connected with the Andes it must be the oriental. Estalla says that the town of Tezcuco is seven leagues to the E. N. E. of Mexico, at the foot of the chain, which serves as the eastern wall of the valley of Tenoxtitlan; and it may be concluded that it passes still further to the south, including Orizava and other volcanoes, while it may be esteemed a singularity that no volcanoes are mentioned in the western chain.* At the distance of nine or ten leagues from Vera

MOUNTAINS.
Eastern
Chain.

Cruz,

* Estalla, xxvii, 120.

* So obscure is the geography of New Spain, that no small confusion prevails even concerning the mountains in the neighbourhood of the capital. The Spanish chart of the gulf of Mexico, republished by the French marine, 1801, gives the position of Mexico $19^{\circ} 23'$; and between the capital and Vera Cruz, a little to the south of the direct line, the mountain of Orizava; whilst somewhat to the north is the mountain of Perote, on the S. W. of the town of Xalapa. This mountain of Perote is described by Estalla as covered with perpetual snow, while on the side there is a strong

Mountains. Cruz, M. Thiery found himself in a plain, with the mountains of Alvorado S. Orizava W. and the Sierras Leones N. W. forming a natural barrier of one hundred and fifty leagues;" and the eastern ridge seems, by his account, to form a barrier of the vale of Mexico; nay, may perhaps be traced as far as Oaxaca, which he describes as situated on the skirts of a branch of the north-eastern mountains.

Tamalipa. This chain seems to be the same which is called the grand Sierra of Tamalipan by Alcedo, in his description of New Leon, and a branch of which is called the Eastern Tamalipa by Alzate. This last branch extends from the deserts of Jaumabe to the eastern coast of the province of Santander, where it is marked on the Spanish chart of the gulf of Mexico by the names of various peaks; while the mountain of Orcafitas, visible at sea, though at the distance of one hundred and sixty miles inland, must nearly equal Orizava in height, and appears to belong to the same branch of the grand ridge of Tamalipa.*

**Southern
Ridges.**

In the kingdom of Guatemala few names of ridges of mountains have been given, the volcanoes having attracted the chief attention. In the district of Sonfonate the great chain of Apaneca runs many leagues east and west." The names of the mountains in the other provinces have

Strong fortrefs. Alcedo says, that to the south-east of the village of Perote is the mountain of the same name, one of the highest of the whole viceroyalty, and discoverable at sea at the distance of more than twenty leagues, being almost equal in height with Orizava, while both serve as land marks to point out the port of Vera Cruz. He adds, that this ridge extends more than six leagues N. to S. covered with pines which supply Vera Cruz with pitch, and full of precipices, rivulets, and lakes. Mr. Arrowsmith's late map, from the want of materials, presents not a few mistakes; but is on an excellent scale, and in many respects is worthy of its author. Alcedo says, that the ridge of Tlascala pervades that province, being one of the highest of the viceroyalty, and covered with perpetual snow. Alzate indicates a volcano about sixty g. miles to the west of Orizava, near Totolapa, where D'Anville places the volcano of Popocatepec, now extinct. It is to be hoped that the maps of M. Humboldt will clear up many difficulties.

Alcedo voc *Oaxaca* says that province is divided from Tlascala by a ridge called Cocola, abundant in gold, silver, crystal, vitriol, and precious stones.

" Thiery, ii. 49.

* Estalla, in his description of New Leon, xxvii. 113, says, that it is divided by many branches of the chief chain, which passing from Coaguilla, incloses all the west and south of New Leon. If this description be exact, it would seem that the eastern chain bends in a semicircular form, including the eastern branch of Tamalipa.

" Estalla, xxvii. 168.

been

been left in oblivion, except that of Canatagua, running N. and S. and MOUNTAINS. dividing Veragua from Panama, North from South America; that of Urraca, and a few others in the maps of Lopez.* If there were a capital ridge passing directly from the Andes, it is impossible that it could have escaped the observation of the Spanish authors, or not have been known by general appellation; but by the map of Lacruz, it appears that the Andes terminate at Darien, where the land, instead of running north, in their constant direction, bends W. and even S. W. through Panama; and it seems an idle theory to connect the mountains of Guatemala, which run in various directions, with those of South America, whose direction is so uniform.

The composition of the mountains of New Spain is little known, but according to M. Humboldt, and the specimens which I have seen, they are mostly of argillaceous schistus, a substance generally prolific of metals.

The volcanoes, in the singular territory of New Spain, instead of Volcanoes. being rare phenomena, as in Europe, are very numerous. In the maps twenty-one may be counted from that of Soconusco in the north, to that of Varu in the south. They are all on the south-western coast, and after a considerable interval they again emerge towards the eastern coast, in the vicinity of Mexico. Concerning these numerous volcanoes it is to be hoped that M. Humboldt will give us interesting information. He has already informed us, that only a small number, and those little elevated, eject lava; but when he adds, that the Andes extend from the strait of Magellan to the most northern parts of America, opposite to Asia, he evinces little acquaintance with geography, a defect too visible in the writings of many celebrated geologists; and there are certainly more than fifty active volcanoes in South America alone. He saw, at the volcano of Jorullo, or Xorullo, a basaltic cone, which appeared above Jorullo. ground, on the 15th September 1759, and which is at this day two hundred and forty-nine fathoms, or one thousand four hundred and ninety-four feet above the surrounding plain—a sublime and striking

* On the north of the province of St. Salvador, Guatemala, is the rugged ridge de los Chontales. Estalla, xxvii. 177.

† Recueil des Obs. Zool. Paris, 1805, 4to. part 1.

MOUNTAINS. object! This volcano of Jorullo is in the province of Mechoacan, at the distance of eight leagues from Pasquaro, the capital, towards the S. W. the volcano of Colima being in the same direction, but at a greater distance. It first appeared on Michaelmas day 1759, with singular circumstances.¹ A delicious and fertile vale, eight leagues in length N. to S. and three in breadth, was called *Xorullo* by the Indians, a word in their language signifying *paradise*: there was in it an opulent farm, belonging to Don Joseph Pimentel, which produced the best sugar of the whole viceroyalty, when, by the sudden eruption of a volcano, the whole was not only ruined, but the valley assumed an infernal aspect, blackened with perpetual smoke, covered with deformed rocks and ashes, the trees consumed, the earth full of deep cracks and openings, and now forming a hill of considerable height, crowned with a volcano. Along its side passes a rivulet, which formerly fertilized the valley, but is now so hot as to burn men or animals who attempt to pass it; an inconvenience, as it is in the direct road to the copper mines in this quarter. Six months before this catastrophe, there were constantly heard horrible subterranean noises, and earthquakes were felt, which filled the inhabitants with consternation; and they would have quitted the ground, if the landlord had not employed a jesuit of some influence to persuade them to remain. The eruptions of the volcano of Colima, though at the distance of seventy leagues, having ceased as soon as the earthquakes begun, it was conceived that the matter had met with some obstruction, and had recoiled to this spot.

Such is the description given by the Spanish authors of this surprising event. M. Humboldt shewed at Paris a drawing of the new volcano, resembling an elevated terrace, with many spiracles of smoke, and at one end an active volcano.*

Orizava.

The volcano of Orizava is regarded as the most majestic in the viceroyalty. D'Auteroche observes, that the mountain Orizava is said to be

¹ Alcedo, Estalla.

* Clavigero, i. 14, alluding to this event, mentions, that in 1759 a small hill near the village of Guacana burst with furious volcanic shocks, and emitted fire and burning rocks till, in 1766, the circumference was six miles. The ashes were borne to the distance of 150 miles; and in Valladolid, or Mechoacan, sixty miles distance, the inhabitants were obliged to sweep their yards two or three times in the day.

the

the highest in Mexico; and its snowy summit is visible from the capital, a distance of sixty miles. This celebrated mountain is to the S. E. of Mexico, not far from the road to Vera Cruz; it became volcanic in 1545, and continued for twenty years, since which time there has been no appearance of inflammation. Though the summit be clothed with perpetual snow, the sides are adorned with beautiful forests of cedars, pines, and other trees.* The detached mountains, called by the Mexicans Popocatepec and Iztaccihuatl, are also to the S. E. of the capital, at about thirty miles distance, both being volcanic. The crater of the former is said to be half a mile wide, and celebrated for ancient eruptions. Both are covered with perpetual snow. There are many other volcanoes in this singular province, while other ridges are only remarkable for height, as the mountain of Tlascala, the Tentzon, Toloccam, and others.

The forests of New Spain are extremely numerous, as may be judged in some degree from the preceding accounts of the mountains, which are often clothed with primeval trees; and no particular account of distinct forests can be expected, in a country of which only small portions have been cleared.

One of the numerous desiderata of topographical botany is a scientific account of the native plants that grow in the Spanish North American territory west of the Mississippi. We know in general that it is extremely rich in its vegetable productions, but are obliged to infer the particulars from the articles of commercial export from the Mexican harbours, and the short list given by Cavanilles of the Mexican plants cultivated in Spain.

The plants that characterize the N. American possessions of the Spanish crown are cactus cochenilifer, a species of the Indian fig, upon which the cochineal insect more particularly delights to feed: convolvulus jalapa, the true jalap, a native of the province of Xalappa, in the

* D'Auteroche, California, p. 37. Clavigero, i. 13, who adds, that it is the highest land of the kingdom, and its conic form observed at sea at the distance of fifty leagues. Some think it higher than the peak of Teneriffe. Gage, p. 69, gives an account of Popocatepec, and says the volcanoes extend as far south as Leon, in Nicaragua. His account of the wilderness, three leagues N. W. from Mexico, p. 70, is curious, and his whole work very interesting. Thierry's account of Orizava has been already mentioned.

BOTANY.

viceroyalty of Mexico; *copaifera officinalis* and *toluifera balsifera*, two trees that yield the fragrant gum resins, known in commerce by the names of balsam of Capivi and of Tolu. The shores of the bays of Honduras and Campechy have been celebrated from their very first discovery for their immense forests of mahogany and logwood; and the neighbourhood of Guatemala is distinguished for its indigo. The guayacum, the saffraas and tamarind, the cocoa nut palm, the chocolate nut tree, and a variety of others, which are better known as natives of the West Indian islands, enrich and adorn those fertile provinces. The pine apple grows wild in the woods, and the shallow rocky soils are inhabited by the various species of aloe and euphorbia. A few Mexican plants have been introduced into European gardens, among which may be noticed the *salvia fulgens*, glowing with its crimson blossoms, the splendid dahlia, the elegant striated *lisyrinchium*, the gigantic *helianthus*, and the delicate *mentzelia*.

To this unhappily brief account some particulars may be added from Thierry, and the recent Spanish writers. In the neighbourhood of Vera Cruz, Thierry found the cocoa tree, a bombax with red flowers, melias and plumerias. Further inland he met with a rare species of wild fig, and groves of sensitive plants and ceibas. The species of cacti, or plants resembling Indian figs, are infinite; and some have been mentioned in delineating the face of the country: *Yuccas*, singular ferns, an arum of great beauty, and so large, that the root weighs ten pounds, the superb lily, a violet with a bulbous root, thistles equal in size to artichokes, bulbous oxalis, junipers, an oak producing monstrous acorns, *lycoperfica*, various geraniums, and heliotropes, that useful aloe called the agave Americana, or maguey. In the plain of Tehuacan he found chiefly cacti, and different kinds of sensitive plants, the soil being sometimes only an inch thick, upon a bottom of silvery talc, while the mountains produce various pines, oaks, &c. Further to the south were bignonias, with yellow flowers, between sixty and one hundred feet in height, while the sugar canes attain a prodigious size, different sorts of crescentia, annonas, beautiful solanas, *asclepias* with yellow flowers, resembling the yellow jasmin. At Cues the precious nopal begins to appear, being cultivated in gardens, where are also found mirafols, and a beautiful sage

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with scarlet flowers. Vanilla grows upon the trees, like our mistletoe. BOTANY.
New syringas and pancratias may also be added to the list.*

Estalla prefers the chirimoya to the pine apple; and observes, that in the market of Mexico there are daily sold more than sixty kinds of fruit, exclusive of the European.* Olives thrive in the archbishop's garden, a league from Mexico; and the province of Tehuacan abounds in pomgranates, but if not grafted, the size becomes diminutive. The celebrated nopal, the chosen haunt of the cochineal insect, is described by Estalla and Alcedo; and the manner of culture is illustrated at great length by Thiery, in whose work will be found exact representations of the cultivated and wild cochineal, which appear however to be entirely different species. Among the productions of Vera Paz, Estalla mentions the tree which yields *liquidambar*, and others of various balsams, gum copal, which, according to some, is the original substance of mineral amber, the mastic tree, and that which yields the gum called dragon's blood. While the reeds of Florida attain the height of thirty feet, here they are said to grow to the incredible height of one hundred feet, and so large, that each joint will contain an aroba of water. According to this author the root of the maguey has been found the most powerful of all specifics against the venereal disease. Of a singular tree discovered in New Spain, and believed to be the only one of the kind existing in the world, a description and coloured plate were published at Paris 1805. The flower is in the form of the human hand. The following description is given by Estalla: "Among the rare trees of this part of America must be especially placed that called *de las manitas*. It grows near the village of San Juan, in the district of Toluca, on the side of a hill, is of a regular form, the leaves somewhat resembling those of the holm-oak, and resisting the rigour of winter and the northern blast to which it is exposed. Once in two years it produces a most singular flower, in the shape of a hand, and of a flesh colour, whence the name has been derived. Several efforts were made to propagate this unique species, which

* The curious botanical reader will find in the last volume of the dictionary of Alcedo, Madrid, 1789, 4to, an alphabetical description of the most useful plants of America; and the botanical labours of Humboldt and Bonpland his companion, which begin to appear, will supply many deficiencies.

* Estalla, xxvi. 318.

BOTANY.

at length have happily succeeded, and young plants are seen in the botanical garden of Mexico."

The same author informs us, that in the town of Atrisco, thirty leagues to the south-east of Mexico, there is a celebrated tree called *abuebute*, measured in October 1767, in the presence of the archbishops of Mexico and Guatemala, and the bishop of Puebla. More than one hundred persons entered the hollow trunk, which was yet far from being filled, because a part lower than the rest was full of water. Two-thirds of the tree are wanting, having been consumed by lightening; but the height from the root to where it was struck is one hundred and seventy palms of Spain;* the outer circumference at the ground one hundred and fifty-seven palms; the concave at the bottom one hundred and fourteen; at the height of three yards sixty-six; and, at the same height on the outside, one hundred and nine palms!† This species is common in New Spain, and generally very large: there is one in the province of Oaxaca forty yards in circumference. The productive powers of the soil also appear in an olive tree, which must have been planted since the conquest, and which is twenty-one yards and three-quarters in circumference.

Zoology.

The zoology has been ably illustrated by Hernandez, styled the Pliny of New Spain, who flourished under Philip II. towards the close of the sixteenth century; but his works remained in manuscript till an extract was published in the middle of the succeeding century. The variety of animals is great, though it do not equal that of the plants and minerals. Among the most singular animals is the Mexican or hunchback dog, a kind of porcupine; and some others described by several naturalists. What is called the tiger seems a species of panther, and sometimes grows to a great size, though Buffon, ever fond of theory, assert that American animals are generally small. In South America it attains the length of a large ox, as appears from the testimony of Dobrizhoffer; but Clavigero says that the largest quadruped is the danta, anta, or tapir, about the size of a middling mule, being amphibious. This animal seems to be different from the lanta or danta of Africa, described by Leo; but the identity of the name tends to corroborate the idea that America was

* The Spanish palm little exceeds nine inches.

† Estalla, xviii. 86. 252.

peopled from Africa. The bison is found in New Mexico; and the musk cattle may perhaps extend as far. In California there are said to be wild sheep. The birds of New Spain are particularly numerous and curious.²¹

To these brief hints some others may be added from the recent descriptions. Even those native animals which seem to approximate the most to the European, are yet different; but the partridges in the desert of the Carmelites, five leagues from Mexico, were brought from Spain, as was the rabbit, now general. What is called a lion rather resembles a cat in figure and manners. Enormous snakes are still said to attack men and animals by the breath, which may simply affect from some peculiar gaz, possessing intoxicating and stupifying power. Tame snakes are also kept in the fields of maiz, where they destroy rats, moles, and insects. The few fish of the lake of Mexico have already been mentioned; but the defect is supplied by numbers of a kind of wild geese, which frequent the lake, and form a great article of consumption in the city. They are often taken, as in China, by Indians, who place calabashes on their heads, and seize the bird by the feet.

The buffalo of North America is common, and valuable for its wool, skin, and flesh. In 1783 four or five were embarked at Vera Cruz, and brought to Cadiz. A female calved in Spain, but the climate of Andalusia would have been preferable to that of Aranjuez, where they died.

Horses, mules, and beeves are common and cheap in New Spain. A horse commonly costs four dollars; but the horses are far from being well trained, and the cavalry is mounted on geldings. Oxen are chiefly used for the plough; but the beef is bad, and left to the poor, while the rich eat mutton and veal.

In the southern provinces are found armadillos, many varieties of apes, beautiful birds and insects; among the latter there is a species of ant, which elaborates a kind of honey, so abundant as to be an article

²¹ Pennant, A. Z. i. 3. from Fernandez Nov. Hisp. x. c. 30. Lockman's Travels of the Jesuits, i. 400. Du Pratz, ii. 95, gives a good account of the humming birds of Louisiana. Hernandez and Fernandez are the same name and person, as appears from Antonio's *Bibliotheca Hispanica*.

ZOOLOGY. of commerce. Its form, and all its habits, are those of the common ant, but it is veined with grey and black. The singularity is, that in the spring the belly swells with honey, to the size of a cherry; so that if from a common ant the belly be taken, and the other parts joined to a cherry, there will be a perfect resemblance of the insect. The honey is of the same taste with that of bees. Observations are still wanting on their food and anatomy.

Mineralogy. The mineralogy of the Spanish empire in North America is beyond doubt the most valuable in the known world, as, in a far smaller extent, it produces far superior wealth to that of all South America. The amount of the produce has been already discussed, in treating of the revenues. Silver forms the chief product; but in some spots gold is also abundant. In his description of the province of Sonora, Alcedo informs us, that during the war with the savages, which ended in 1771, rich mines of gold and silver were discovered in various parts. Above all, in the plain of Cieneguilla,* of the length of fourteen leagues, there were found lumps of gold so large as sometimes to weigh six pounds, at the depth of only two feet. Two thousand persons soon settled in the vicinity, and a general commandant of the province was named, it being regarded as one of the richest in the whole viceroyalty, as all the mountains abound with silver and gold. But the incursions of the enemies, the want of labourers, and the difficulty of procuring quicksilver, have concurred with the abundance of mines near the capital, as the causes why those of Sonora have been neglected.

Till within these forty or fifty years, the richest silver mines of New Spain were those of Zacatecas, about two hundred B. miles to the N. W. of Mexico; but the minerals appear to have been chiefly smelted at St. Luis de Potosi, which had also rich mines in its neighbourhood, dis-

* This plain of Cieneguilla does not appear in the maps; and Alcedo has omitted it in his alphabet. It is probably in the N. E. part of the province.

Venegas, in his history of California, English translation, London, 1759, 2 vols. 8vo. says, i. 286, that Sonora is bounded on the east by the high mountains of Tarra Humarra, some of which seem to consist of massy silver. According to the same author, p. 305, the mountains of Santa Clara (on the west of Santa Fe) are covered with pumice, or in other words, have been volcanic. He observes, ii. 203, that the Apaches are mostly cavalry, and very daring in their incursions.

covered soon after those of Potosi in South America, 1545, whence the name was transferred.

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But the grand mines at present are at GUANAJUATO, considerably nearer the capital, being a distance of only one hundred B. miles, while it is about one hundred and forty to the east of Guadalajara, and about fifty to the N. W. of the city of Queretaro. This celebrated mining station is on the Sierra Madre, or chain of Topia, as were the former mines of Zacatecas, that chain being perhaps the richest in the universe, even to its northern extremities in Sonora and Pimeria. The mines in the vicinity of Guanajuato produce abundance of gold, silver, and copper, and are carried to great depth, so that the expence of voiding the waters is not a little considerable. The *Real* (a general name for the royal mining stations) of St. Nicholas is three leagues to the N. while others extend four leagues to the W. The chief mines of gold and silver are the Puerta Ovejera, Mora, San Bernabé, Rosario, and Medalla, but faintly laboured by the indolence of the Indians. There are besides five mining stations within the mountains, each having a church, and chaplain to administer the sacraments; there are also in the vales forty-three smelting houses, giving bread to numerous troops of workmen, who consume annually one hundred thousand loads of maiz, eighteen thousand sheep, five thousand beeves, and eighteen thousand loads of meal, the villages being sixteen in the township of Irapuato." Specimens of these mines, which M. Humboldt brought to Paris, were rather rich than beautiful, being some of the common appearances of the various ores.

Having thus briefly described the most celebrated mines of New Spain, it may be added, that all the southern and western provinces are regarded as productive of gold and silver; and in an especial manner all those to the west of the Topian chain, from Guanajuato, at its southern extremity, to Pimeria in the furthest north: and *Reals*, or mining stations, are scattered throughout its whole extent within the viceroyalty.* The great

* Alcedo.

* In Pimeria, near the Real of Arizona, there was discovered in a mountain such abundance of virgin silver, that some supposed it a hidden treasure. Rock salt of great purity was also found. Estrella, xxvi. 33.

MINERALOGY.

great inland province of Tamaulapa also abounds in silver, the chief *Real*, or mining station, being St. Eulalia. The grand eastern ridge, or Tamalipa, is by no means so opulent; but two or three mining stations appear in the province of New Leon, which also, by the information of Alcedo, abounds in silver, or rather in lead, which is the chief object of the mines, and which produces, as usual, some silver. Towards the south Panuco, or the Guasteca of the maps, has some mines of gold, and one *Real* of silver, dependent on Zacatecas, whence it is only distant three leagues. Nor is the new province of Santander destitute of silver, according to Alcedo; but when he speaks of the ridge which gives birth to the rivers, the western province of New Leon must be implied; and it does not appear that the eastern, or maritime branch of the Tamalipa, is metallic.

Coaguilla is, by the confession of Alcedo, a desert waste, and its mineral treasures, if any exist, have not been explored. The few mines of New Mexico, by the same authority, are all of tin. California presents some appearances of minerals, but they have been little explored.

In the time of the Mississippi scheme, the seizure of the mines of St. Barbe was held forth as a capital object, and they are placed by Delisse immediately on the west of the river Magdalena, or Guadalupe. These mines do not appear to have ever existed; but, from the remarks of

Antillon, Carta, &c. Madrid, 1803, 4to. informs us, p. 41, that the stations for washing the gold, *lavaderos de oro*, abound in Sonora, and particularly in the hills near the capital station of Arispe, where are those of Bacuache, Cananes, and Penuelas, where pieces have been found of the weight of seven marks. In the same parts is the mine of St. Rosalin, which yielded gold of 17½ carats in such abundance, that the value of some loads amounted to one thousand pesos each. The mine of Bonamitri is also of gold. There are no less than thirty-seven mines of silver in the district of Arispe, one of which yields eighteen marks from the load of mineral, probably a mule's load. In the same province, towards the gulf of California, there are several mines not far distant from the garrison of Altar, and the *Real* or royal mining station of Rosario. In upper Pimeria is the celebrated mine of Arizona, eight leagues from the village of Surie, which in 1736 yielded balls of virgin silver, to the weight of a hundred and fifty arrobas, or near forty hundred weight. On proceeding by New Biscay and New Mexico, are found the mines of Cosagurichi, and many others, not less rich in gold and silver. In New Santander there are the mines of Iguana, not far from Laredo; and in New Leon those of St. Diego. Our author proceeds to mention the noted vale of Cieneguilla, in the province of Cinaloa; but for this remarkable fact he is contented to quote Dr. Robertson; without any reference to Alcedo, or other authorities, who place this vale in the province of Sonora.

Estalla,

Estalla, it would seem that there are strong appearances of minerals in the province of Texas, a part of the ancient Louisiana. His words are as follow:²¹ "The minerals of New Spain seem to increase as we proceed towards the north. It is well known that the greater part is not discovered, such mines having only been wrought as were unveiled by accident. This will be evident from a letter written from the province of Texas, by the auditor Don Juan de Olivan Rebollo: 'From the river, which is called de la Nueces,* distant from the garrison of Adaes about three hundred leagues, the whole country, in every direction, is full of minerals, with this circumstance, that every foot of the surface of the earth, when torried in a smith's forge, yields particles of silver; yet to this day no one attends to it, the soldiers, who might gain greatly, being occupied with other affairs.' But many mines are left undiscovered, because the northern parts are almost uninhabited, and have never been explored by intelligent men. The farms are of such an extent as to rival petty kingdoms. Many towns and villages might be built, whose traffic would lead to many discoveries, from the tropic of Cancer towards the north, while there are only a few villages maintained by the missionaries, and infested by the Chichimecos and other savages."

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Having thus mentioned the chief mines of gold and silver in New Spain, and indicated the amazing opulence of the viceroyalty in these precious metals, it may be proper, before passing to the inferior metals, to consider the produce of the coinage. Some hints have already been given under the article of revenues, but a more complete explanation was reserved for the present topic. The beneficial influence of the freedom granted to commerce, which has increased the mining operations, from causes already explained, is very visible from the comparative quantities of money; for during thirteen years, from 1766 to 1778, there were coined at Mexico two hundred and three millions, eight hundred and eighty-two thousand, nine hundred and forty-eight pesos, seven reals; while, during another thirteen years, from 1779 to 1791, there were coined two hundred and fifty-two millions, forty-two thou-

²¹ Estalla, xxvi. 249.

* This is the first great stream on the east of the Rio Bravo.

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land, four hundred and nineteen pesos, and half a real, the difference being more than forty eight millions." It must at the same time be observed, that gold and silver are now rarely sent to Spain in bars, or ingots, nor are they consumed in plate. Before the freedom of commerce the coinage never exceeded twenty millions of pesos; and in 1792 and 1793, it annually surpassed twenty-four millions.* More stock being now employed in working the mines, they are carried to a greater depth than formerly, and operations of more difficulty are undertaken; the new works are also conducted with more regularity and intelligence. To prevent frauds and irregularities, the royal tribunal of mines was erected in 1777, the expences being derived from a tax of eight grains on each mark of silver brought by individuals to the mint; the annual amount being about one hundred and sixty thousand pesos; from which are taken the salaries of the tribunal, and of a college of mines for the instruction of youth, while the remainder is employed for the accommodation of the miners; the tribunal having thirty-nine thousand, college twenty-five, salaries eleven, so that eighty-three remain to assist proprietors. The duties on mining utensils have been lowered, and able miners brought from Germany, to inculcate the new principles, and display improved methods and machines. As the procedure by amalgamation has become almost universal, quicksilver is an essential article; and many mines in the north have been abandoned, on account of the great difficulty and expence in procuring and transporting it through countries destitute of roads. It is also an article of monopoly to the royal treasury." That of Almaden, in Spain, is sold in Mexico at forty-one thousand two hundred and eleven *maravedis* each quintal, but the quantity not being sufficient, a contract has been entered into between the courts of Spain and Austria, which supplies a large quantity from the mines of Idria. This is sold at sixty-three dollars, and generally produces about seven hundred thousand pesos. This monopoly of the trea-

* Estalla, xxvii. 11, and 212.

• Bourgoing, ii. 208, values the products of Peru and Mexico at twenty-two millions of dollars, *piastres fortes*, the coinage of Mexico being more than eighteen millions of *piastres fortes*. And p. 264, the mines of New Spain yielded in 1802 twenty-seven millions, and might have produced thirty millions, or near seven millions sterling.

• Estalla, xxvii. 221.

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 fury also serves as a check on the masters of mines, who are obliged to produce a corresponding weight of metal; but the quantities not being sufficient, some is brought from the mine of Guancavelica, in Peru, and some even from China. This last is dearer, but the governor of Manilla was instructed to purchase all he could procure, from the produce of fourteen thousand six hundred and sixty-two skins of beavers, sent to China upon his Majesty's account; while that of Idria sells at sixty-three pesos, the Chinese is fifty-seven, but it is of excellent quality. There are mines of quicksilver in New Spain, but they have not been sufficiently explored. A new mode of package in hogheads has been found preferable to that in chests. Salt and gunpowder, of great use in metallurgy, are also royal monopolies.

As New Spain is by far the richest mineral country in the world, and the Spaniards derive their chief supplies from this source, the reasonings of an intelligent traveller, who resided fourteen years in Spain, upon this interesting subject, may deserve particular attention.*

"It might be said to the Spaniards, 'Far from making efforts to draw from your mines all that they can produce, you ought rather to shut a part. Confine the influx of your metals into the ancient continent to the quantity necessary to replace the insensible waste, what luxury converts into utensils, and what avarice buries either in Asia or Europe. Follow the example of the Portuguese, who restrict the operations in their diamond mines, in order that the value may not be diminished; and that of the Dutch, who burn a part of their spices, that the price may be maintained. The silver of Mexico is your diamonds and your spices; if you triple the sum, your miners, whose labour might be more usefully exerted on other objects, will have more occupation, but you will not be more rich. You will only pay a triple price for the productions of foreign industry, which will always be necessary, in a greater or less degree.'

"To these specious arguments it is answered in Spain, 'We do not perceive any thing terrible in this augmentation of currency. In the first place, the duties present a clear profit to the public treasury; and while the other states of Europe are occupied with encreasing their revenues,

* Bourgoing, ii. 270. ed. 1803.

that

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that they may support great enterprises either in peace or war, by what fatality should it happen that Spain may find causes of decline in what is thought to constitute the prosperity of other states ?

" We may say as much of our manufactures. As long as their operations shall keep pace with the exploration of our mines, our currency will be increased, both by what we employ to pay foreign industry, and with the surplus of what is furnished by Mexico and Peru. Nor do we see any thing dreadful in the prospect. We ask, on the contrary, what are the most flourishing nations. Are they not France and England, those who have by far the most abundant currency ? Of what consequence is the source from whence it springs ? The combined product of our mines and of our industry, it will still be useful to Spain in the hands of great capitalists, who will embellish our cities and country, will furnish funds for public establishments, and will supply the state in critical periods with loans at a lower interest than formerly. We agree, nevertheless, that the hour may come when our prosperity, carried to the utmost, will bring on our decline : this will happen when our manufactures shall become so active and complete as to render foreign industry useless. If at the same time the product of our mines tended always to encrease our currency, without its finding any emanation, certainly this situation, which must however be regarded as a mere hypothesis, would have invincible inconveniences. The excessive dearness of manual labour in Spain would introduce, in spite of all opposition, the productions of foreign manufactures. The currency would escape by the wide channels thus offered ; the national manufactures would languish ; the workmen disappear from the want of employment : and Spain would be again abandoned to depopulation, idleness, and poverty. But the circumstances which might realize this prospect are very remote ; and in waiting till a more imminent danger may condemn to inactivity either our manufactures, or our mines, we think that we may continue to draw from that double source our future prosperity."

Besides gold and silver, many other metals are found in the viceroyalty. Not far from the capital are mines of tin, of which M. Humboldt brought specimens to Paris, mostly crystalised, and resembling those

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those of Saxony. This rare metal is also found in New Mexico.* Copper has already been mentioned, in describing the rich mines of Guanajuato; and mines of the same metal are worked to the west of Páscar, the capital of Mechoacan.† Lead is among the products of New Leon.

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Amber and asphalt likewise occur in New Spain: and among the precious stones a few diamonds, as is said, with amethysts and turquoises; but the list is imperfect, and perhaps erroneous. The mountains also produce jasper, marble, alabaster, magnet, steatite, jad, talc. The stone called *tetzontli*, red and porous, was used in building, being perhaps a kind of tufa. The *itzi* is semi-transparent, of a glassy substance, and generally black, but also found white and blue: it was used in mirrors, and also for sharp instruments, being the same called *pietra del Gal nazzo* in South America, the obsidian or volcanic glass of modern mineralogy.‡

In the province of Tecali, to the S. E. of Puebla, is found a considerable quarry, of what Alcedo calls marble, of a green and white colour, of which altars for churches have been constructed, and even lanterns as clear as glass. Among the most singular fossils may be mentioned the

* Clavigero says, i. 387, that the Mexicans used thin pieces of tin, and bits of copper in the shape of a hammer, as money. The chief tin mines are now near Durango. *Est.* xxvii. 239.

† The principal copper mines seem to be in the neighbourhood of Páscar, and the trade of that city is chiefly derived from them. *Estalla*, xxvii. 90.

‡ At the end of D'Aueroche's voyage to California, there is a curious letter from Alzate, a Mexican gentleman, to the Royal Academy of Sciences at Paris, on the natural history of New Spain. He mentions some trees of surprising size, one of them fifty feet in circumference; and, perhaps credulously, reports that, in digging a mine in the province of Roucra, petrified human bodies were found, which yielded a considerable quantity of silver. The large teeth and bones seem to be the same with those of the mammoth; and he obscurely describes basaltic columns. The bell stone is probably the sonorous marble of China. The cedar silver ore of Huajanato (Guanajuato?) seems only dendritic, mingled with spar.

Hernandez, or Fernandez, physician to Philip II. of Spain, who wrote about 1580, compiled a large collection in manuscript concerning the natural history of New Spain. An abridgment was published by Ximenez, in Spanish, and afterwards translated into Latin, and published at Rome, 1651, folio. The minerals are enumerated in the tenth book, in the imperfect manner then practised, and with a ridiculous reference to their uses in medicine. In the Supplement, however, the objects are such as have no use in medicine; and among others he mentions, p. 85, the *tequilal*, a kind of earth, rising to the surface of the lakes, which was preserved as cheese, and eaten with maize. The cakes prepared from it, though the smell was that of mud, tasted like cheese, and the colour was yellow or green. Some lakes thus yielded a considerable income to the proprietors.

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bones of elephants, mentioned by Estalla.* On digging the foundations of the convent of Guadalupe, near Mexico, these bones were found in different parts, lying upon sand, at the depth of four yards, above was sand and hard clay. The same bones were found in excavations in the hill Tepeyac. A tusk found at Guadalupe was three Spanish yards and one-third in length, so that the animal seemed to be greater than the elephant. But they are the same with those of the mammoth of Siberia and North America, which seems to have been a large species of elephant, adapted to cold climates, but now extinct.†

Natural Curiosities.

There are several mineral waters of various qualities, sulphureous, vitriolic, and aluminous; and some springs of great heat, but none seem particularly distinguished. Besides the volcanoes, there are many natural curiosities, one of the most remarkable being the Ponte de Dios, or bridge of God, resembling the natural bridge in the territory of the United States. It is about one hundred miles S. E. from Mexico, near the village of Molcaxac, over a deep river, called the Aquetoyaque, and is constantly passed as a high-way; but it seems uncertain whether the river have worn the passage through a rocky mountain, or the fragment be part of a fallen hill detached by an earthquake. There are many romantic cataracts, among which must be mentioned those of the river Barnaja, between the city of Guadalaxara and the lake of Chapala. The floating gardens in the lake of Mexico were artificial curiosities, the bottom being formed of intertwisted willows.

In the province of Vera Paz, which seems to be chiefly calcareous, as it abounds with spots where rivers suddenly sink under ground, there is, between two high ridges, a cave of great extent, with many detached recesses, abounding with beautiful stalactitic columns and figures, which appear alabaster.‡ The cold is extreme, and a great noise of water is heard, which rushing from various parts, forms, at a little distance from the mouth of the cave, a lake of great depth, which rolls like a sea, and

* Estalla, xxvii. 250. Humboldt found them on the Andes, at the height of eight or ten thousand feet.

† See the *Essai de Geologie* of M. Faujas, p. 257.

‡ Estalla, xxvii. 169.

gives birth to a river, which in a short space vanishes under ground.* NATURAL
This province also abounds with lofty and picturesque cataracts, which CURIOSITIES
are likewise frequent in many parts of New Spain, the whole of which
may in fact be regarded as one natural curiolity. But the indolent su-
perstition of the inhabitants leads them to prefer puerile acts of lazy and
pretended devotion, to that real and sublime devotion which contem-
plates the hand of God in the works of his creation.

On the sea coast of Florida the shooting of the stars, as it is termed, is
sometimes so general throughout the firmament, as to appear like a grand
fire-work of sky rockets, flying in all directions, a spectacle singularly
awful and sublime." The bodies of dead fish filling the ocean with
phosphoric matter, and a vast weight of water flowing into the gulf of
Mexico, and probably bringing prodigious numbers of these bodies, may
not this appearance arise from the evaporation of the phosphorus under
the strong heat of a tropical sun?

REMOTE AND DISTINCT PROVINCES.

As in some countries the description of the appendant islands has been
necessarily subjoined, so in some it may be proper, for the sake of greater
clearness and precision, to give short accounts of detached provinces,
which cannot so well enter into the general and compact delineation of
the political and natural state of a country, considered on a large and
truly geographic scale. Thus, in a description of the Prussian domi-
nions, the district of Neufchatel becomes heterogeneous, and might be
detached. Sweden is in the same predicament, with respect to Pome-
rania. In like manner, since the province of Louisiana has passed to the

* There are many subterranean rivers in the province of Yucatan, where, according to Estalla,
there is no large visible stream, except that of Lagartos, between the ports of Silan and Cuyo, on
the N. of this peninsula.

" Ellicott's Journal, p. 243,



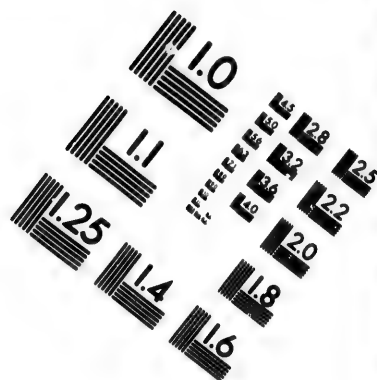
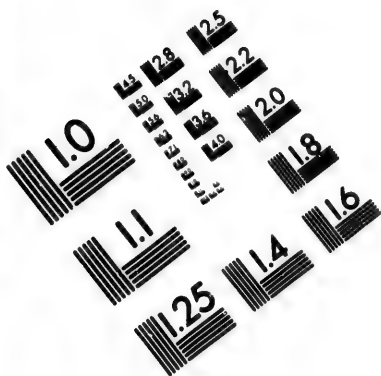
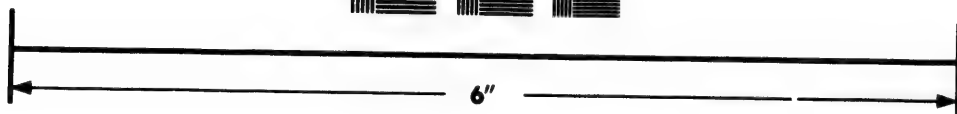
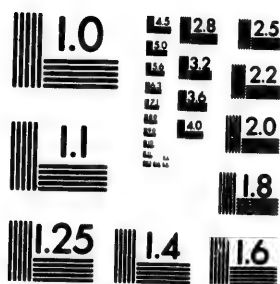


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REMOTE
PROVINCES.

United States, the Floridas have become separate provinces; and California is nearly as detached from New Spain as if it were an island, and has always been treated apart by the Spanish authors.

Florida.

East and West Florida were for a considerable time subject to Great Britain, and found by experience to be of little utility or importance. But to the United States the possession would be valuable, on account of the extent of coast, and as giving a compact uniformity to their dominions. This cession might also be prudent on the part of Spain, as diverting the attention of the States from the riches of the west, and as a mean of amity. West Florida, in particular, is chiefly useful as presenting avenues of commerce. The population is very inconsiderable, Mobile and Pensacola together not containing above 1500 souls." It is the river Conecuh, not the Echambia, that runs into the bay of Pensacola. The interior of East Florida is little known, and only inhabited by a few wandering Creeks or Seminoles. The town of St. Augustine is found not to be so unhealthy as had been conceived; and in the hands of an industrious people, the draining of the inland marshes might improve, beyond all conception, the climate and appearance of the country, which often joins the pernicious mixture of heat and humidity. The natural history is not unfamiliar to the English reader, the country having been so long in our possession.*

California.

Of California tedious descriptions have been published and translated into the English language, to which the patient reader may be referred. The savage tribes are the Edues in the south, as far as the Cape St. Lucas, but they call themselves Monquis; and there is a tribe of the same name on the west of New Mexico. The northern savages are the Laymones, or Cochimies." Towards the centre of the peninsula some volcanoes are said to have been discovered. The Spanish possession is only marked by little stations of missions, consisting of some hovels, with a poor cottage called a church. The climate seems to be divided between excessive cold and torrents of rain, while water-spouts and hurricanes are not unfrequent, and thick fogs serve to diversify these advantages.

* Ellicot, p. 236 and 274.

* See Stork's description of East Florida, with Bartram's Journal. London, 1769, 4to.

* E&alla, xxvi. 18.

The soil seems also to display a great variety of barrenness. The chief product is derived from the fur of foxes and other animals. Such is a country under the same latitude with part of China, Hindostan, Persia, and Egypt.*

REMOTE
PROVINCES.

The northern province, or what is called New California, extends, by the Spanish accounts, to Cape Mendocino, which since the disputes concerning Nootka Sound, and the following treaty, which permitted the English to form settlements as far as that promontory, is regarded by the Spanish writers as at least a temporary boundary.† The account of the Spanish voyage of discovery on the north-west coast of America in 1792, and published at Madrid in 1802,‡ informs us that this region is possessed by two nations, the Essenes and Runsienes, who are much dispersed, and shew little reverence for their chiefs. Their manners differ little from those of the other tribes; but they imagine that after death they are changed into owls, which is not improbable. In this work may be found a table of the missionary stations of New California, from St. Diego in the S. as far as St. Francisco in the N. The principal garrison is that of Monterey, founded 1769, in a tolerable soil, for La Perouse observed maiz, barley, and peas;³⁰ and by his account even the climate of the peninsula is mild though foggy; but he visited it at a particular season, and could only see a little of the coast, so that the testimony of the Spanish writers must be preferred. Monterey, by exact

New Ca-
lifornia.

* For an account of the state of California in 1794, see Estalla, xxvi. 94, from three printed letters of a Dominican missionary. The most common plant is the *Mezcale*, which covers the mountains and valleys, and, like the maguey of the south, supplies the savages with food, drink, and clothing. The missionaries have planted olives, figs, pomgranates, vines, peaches, all which produce abundantly. But though the land be generally barren, fish are abundant, and some of the shells are exquisitely beautiful. The Spaniards have begun to carry on a fur trade with China. At 24°, near the mission of All Saints, there is a Real, or mining station, called St. Ann, and the silver is of great purity. The number of the savages has of late been prodigiously reduced by the venereal disease, and epidemical disorders, especially that of 1788. San Diego is the most southern mission of New California. The whole missions in 1787 were seventeen hamlets, containing three thousand and fifteen souls, and sixty soldiers.

† New California begins at 32° N. lat. Estalla, xxvi. 7.

‡ Relacion del viage hecho por las goletas Sutil y Mexicana, &c. 4to. with an Atlas.

From Monterey, and even from the Red River to Cape Mendocino, the country is covered with immense forests of pines, and other trees. Estalla, xxvi. 32.

³⁰ ii. 203.

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PROVINCES.

Spanish observations in 1791, is in N. lat. $36^{\circ} 35' 45''$, and the longitude west of Cadiz $115^{\circ} 47' 30''$.* The shells on the coast are beautiful, particularly the *aliotis myde*. In the back country there are volcanoes, whose fires are distinguishable by night. By the account of the Spanish voyage the savages of Nutka, or Nootka, are anthropophagi, like those of New Zealand, and some other isles in the Pacific. The introduction to this interesting voyage gives a view of Spanish discoveries in this quarter since the time of Colon; and observes, that there is no mention whatever of Fuca, nor of Fonte, whose pretended discoveries of straits and seas have amused so many theorists, in the naval records, nor in the archives of Spain. In the voyage of 1775, at lat. $56^{\circ} 8'$, high mountains were observed, covered with snow, while that of St. Jacinto stands separate, on a cape called Engano (lat. $57^{\circ} 2'$, long. W. of Cadiz $129^{\circ} 40'$), in the shape of a cone, from which torrents of water run into the sea, forming a beautiful prospect." They saw mount Elias, covered with brilliant snow, contrasted with the surrounding forests of pines; and its height above the sea was estimated at six thousand five hundred and seven varas of Castile, or about fourteen thousand six hundred English feet. The Russian settlements near Cook's river, and in the isle of Onalaska, only contained each about forty or fifty persons. During the voyage of 1790 a most singular circumstance occurred, for in N. lat. $60^{\circ} 54'$, that is by our maps in Prince William's Sound, a horrid noise being heard, the boats were sent ashore, and it was discovered that it proceeded from a wide plain covered with snow, *trezas* or truncheons of which darted into the air with great force and dreadful noise." This entirely new phenomenon may perhaps proceed from subterranean winds, for any degree of volcanic heat would melt the snow; and it is in itself so incredible, that it would not have been here repeated, if great judgment and accuracy had not been displayed in the whole Spanish publication. The truth and explication must be left to future enquirers.

* In general the Spaniards count the longitude from the isle of Ferro round the globe; thus the cape of Corrientes is $168^{\circ} 10'$.

† P. xcv.

‡ P. cx.

ANTILLON, professor of geography in the seminary of nobles at Madrid, has published maps of various parts of the world for the use of that seminary, with explanatory analyses, or what we call memoirs. That of North America forms the fifth number, and was published in 1803. The memoir contains some useful information, of which proper use has been made in this volume; but the map itself deserves attention upon many accounts, and particularly with regard to New Mexico and the adjacent countries.* Santa Fe being placed in the lat of $36^{\circ} 12'$, the sources of the Rio Bravo are 40° . From the same chain of mountains several rivers flow to the W. and join the Colorado, among which the Zaguuanas is the most lengthened stream, and may therefore be regarded as the Colorado itself. The sources of the Gila, which joins the Colorado from the E. are laid down near the station called Paso, on the Rio Bravo, lat 34° ; but it is to be regretted that he has, like most map makers since the time of D'Anville, shewn little judgment in the general disposition, nearly one-third being filled with the fabulous bay of Baffin, while if he had enlarged the scale in the south, he would have rendered more essential service to geography.

On the west of the Colorado the river of Martyrs and that of Pyramids have unknown terminations, perhaps in the same lake, perhaps in the Colorado. In lat 39° , west long. from Madrid $110^{\circ} 30'$, there is a large lake without a name, which receives two considerable rivers from the E. one of which is called Buenara. From lat 40° to 43° , and under the same meridian, extends another large lake, not fully explored,† where the fathers Velez and Escalante terminated their discoveries, and the utmost inland knowledge of the Spaniards.

On the east of the same chain which gives birth to the Rio Bravo, arise two rivers, which probably join the Missouri; and it appears that the eastern river of Colorado has been confounded with another river of the same name, with the epithet of Nachitos, which probably joins the

* The northern provinces in the map are chiefly rectified from the recent observations of Bauza. Santa Fe is placed from the observations of Spanish engineers. P. 43.

† This seems to be that of Imparicas, p. 45.

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MENT.

Arkanza. In the same quarter the river Trinidad seems to be laid down with more truth and nature than in other maps, first flowing to the N. and afterwards impeded by a chain of mountains, it bends to the S. but the Americans have many discoveries to make in Louisiana. Another remarkable feature is the river Puerco, which runs parallel with the Rio Bravo, and joins it at $98^{\circ} 45'$ W. of Madrid. Arispe, the capital station of Sonora, is $104^{\circ} 30'$, lat. $30^{\circ} 30'$.

The western coasts of the gulf of Mexico are taken from the map published in 1799, by the Direccion de Trabajos Hidrograficos. This map would no doubt admit of many corrections and improvements, especially after the observations of Cevallos, commander of a vessel stationed in these seas, some points being ill expressed, to the danger of mariners. The direction of the shores is sometimes unexact, and the real extent of the gulf towards the west not rightly delineated.* According to Mr. Arrowsmith there is an error of sixty-three miles.

The interior of New Spain is extracted from the map of the kingdom of Mexico published by Siguenza, and rectified by Alzate in 1772; but there are many errors, both of longitude and latitude, and the coasts are ill laid down.

Mexico, by many observations of Galiano, is situated in $19^{\circ} 25' 27''$ N. lat. and $93^{\circ} 15' 45''$ W. of Cadiz, that is, $95^{\circ} 49' 49''$ W. of Madrid; so that all the maps are very erroneous in this principal position. Vera Cruz, by repeated observations of the Spanish officers, is $19^{\circ} 11'$ N. lat. and $92^{\circ} 20' 54''$ W. of Madrid, being the same with that in the *Connoissance des Temps* for the year xii. As Madrid is $3^{\circ} 12'$ W. of Greenwich, there must be an error of nearly a degree in our tables. In his last map Arrowsmith has placed Mexico $99^{\circ} 51'$ W. of Greenwich, while by the Spanish observations it is $99^{\circ} 1'$.

In the southern parts, from the smallness of the scale, little advantage can be procured, but the whole is curious and interesting. The position of Oaxaca, however, deserves mention, being by the scale about forty g. miles to the west of Tecoautepec, lat. $16^{\circ} 35'$, long. 92° from Madrid; while by Arrowsmith's map this capital position is about 157 g. miles N. W. of Tecoautepec, lat. $17^{\circ} 30'$, and to the S. W. of Vera

* Antillon, 34.

* Cruz

Cruz instead of S. E. as all the Spanish maps indicate. The many large rivers passed by M. Thiery, and the whole course of his journey, evince that Oaxaca must be greatly to the east of Mr. Arrowsmith's parallel. It is unknown what maps were used by Alcedo, but he gives the following longitudes from the isle of Ferro:

Antequera, or Oaxaca, $277^{\circ} 10'$ lat. $18^{\circ} 2'$

Tecoantepec, - - - $278^{\circ} 46'$ lat. $17^{\circ} 30'$

It need not be added that his longitudes and latitudes are in general totally erroneous.

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BRITISH POSSESSIONS IN NORTH AMERICA.

CANADA.—Divisions.—Extent.—Religion.—Government.—Population.—Revenues.—Manners and Customs.—Language.—Cities and Towns.—Manufactures and Commerce.—Climate and Seasons.—Face of the Country.—Soil and Agriculture.—Rivers.—Lakes.—Mountains.—Zoology.—Mineralogy.—Natural Curiosities.—NEW BRUNSWICK.—NOVA SCOTIA.—CAPE BRETON.—NEWFOUNDLAND.—THE BERMUDAS.

THOSE parts of North America which still belong to Great Britain are extensive, and of considerable importance, though so thinly peopled, and in such a disadvantageous climate, that they sink into insignificance, when compared with the great and flourishing colony belonging to Spain, or with the territories of the United States. The inhabitants of the former have been estimated at three millions, and those of the States at five; while those of the British possessions scarcely exceed two hundred thousand souls, and the far greater part are French and indigenes.

Divisions.

The chief of these possessions is Canada, now divided into two provinces, called Upper and Lower Canada, the former being the western division, on the north of the great lakes or sea of Canada; while the lower division is on the river St. Lawrence towards the east, and contains Quebec, the capital, and the chief city of our remaining settlements.

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On the east of Canada, to the south of the river St. Lawrence, is Nova Scotia; which, in 1784, was divided into two provinces, that of Nova Scotia in the south, and New Brunswick in the north. DIVISIONS.

What is called New Britain comprehends the most northern parts towards Hudson's Bay, and the coast of Labrador. The large island of Newfoundland; that called Cape Breton; and the neighbouring isle St. John, complete the chief denominations of British territory. But in the English maps, while Greenland is assigned to Denmark, all the other most northern parts of America, on the east and on the west, as far south as the port of Sir Francis Drake, are impressed with the colour of British territory. By the right of prior, or at least of more complete and precise discovery, the western coast might be considered as belonging to England, according to the established usage of all European nations; and which of course must be admitted as valid in a cause between any two of them. This right may indeed be carried to a ridiculous excess; and we have seen navigators, in our own time, giving new names to places in Cochin China, a country perhaps as civilized as their own; which is the same as if a Chinese junk should sail up the Thames, and the captain bestow new names upon every object. But in a country thinly inhabited by savages, and adapted for European settlements, the case is totally different; and any usage, however ridiculous, must be admitted which tends to prevent disputes and contests. The first settlement seems however to be the most rational claim; and no such event having yet happened, the western coast of North America shall be arranged among the Unconquered Countries, which seems to be the most proper method, when the settlements are only a few detached factories, to which the natives profess no subjection. Hence the regions around Hudson's Bay, with Labrador and Greenland, are, from the intense severity of the climate, declared free by nature, and shall also be classed among the Unconquered Countries. The present short description shall therefore only comprise Canada, and the other British provinces in the south, which form actual possessions or colonies.

C A N A D A.

Extent.

THIS country is computed to extend from the gulf of St. Lawrence, and isle of Anticosti, in the east, to the lake of Winnipeg in the west, or from long. 64° to 97° west from London, thirty-three degrees, which in that latitude may be about 1200 g. miles. The breadth, from the lake of Erie, in the south, or lat. 43° , may extend to lat. 49° , or 360 g. miles; but the medial breadth is not above 200. The original population consisted of several savage tribes, whose names and manners may be traced in the early French accounts, which may also be consulted for the progressive discovery, the first settlement being at Quebec in 1608. During a century and a half that the French possessed Canada, they made many discoveries towards the west; and Lahontan, in the end of the seventeenth century, has given a tolerable account of some lakes beyond that called Superior, and of the river Missouri. Quebec being conquered by Wolfe 1759, Canada was ceded to Great Britain by the treaty of Paris 1763.

" The old province of Quebec was divided into two provinces, distinguished by the names of Upper and Lower Canada, by an Act of Parliament passed in the thirty-first year of his Majesty's reign. The line of division commences at a stone boundary on the north bank of lake St. Francis, at the cove west of Point au Bodèt, in the limit between the township of Lancaster, and the seigniory of New Longueil, running in the direction of north thirty-four degrees west, to the westernmost angle of the said seigniory of New Longueil; then along the north-western boundary of the seigniory of Vaudreuil, running north twenty-five degrees east, until it strikes the Ottawas river. It ascends that river into the lake Tomiscanning, and from the head of said lake proceeds by a line drawn due north, until it strikes the boundary line of Hudson's Bay; including all the territory to the westward and southward of the said line, to the utmost extent of the country distinguished by the name of Canada.

" The province of Upper Canada is bounded to the eastward by the CANADA United States of America ; that is, by a line from the forty-fifth degree of north latitude, along the middle of the river Iroquois, or Cataraqui, into lake Ontario ; through the middle of this likewise, until it strikes the communication by water between that lake and lake Erie ; thence along the middle of the communication into lake Erie, through the middle of that lake, until it arrives at the water communication between it and lake Huron ; thence again through the middle of lake Huron, to the water communication between it and lake Superior ; thence through lake Superior northward, to the isles Royale and Philippeaux, to the Long Lake, and the water communication between it and the Lake of the Woods ; thence through that lake to the most north-western point thereof, and from thence in a due west line to the river Mississippi. To the westward and to the northward, west of the Mississippi, its boundaries are indefinite, the northern limits of Louisiana not being thoroughly known. To the northward it is bounded by Hudson's Bay, as settled by the treaty of Utrecht, in the forty-ninth parallel of north latitude, extending west indefinitely.

" The province is divided into eight districts. 1. The eastern district, embracing the counties of Glengary, Stormont, Dundas, Prescott, and Russell. 2. District of Johnstown, embracing the counties of Grenville, Leeds, and Carleton. 3. The midland district, embracing the counties of Frontenac, the incorporated counties of Lenox and Addington, Hastings, and Prince Edward ; with all that tract of country which lies between the district of Johnstown, and a line drawn north sixteen degrees west from the north-west angle of the township of Rawdon, until it intersects the northern limits of the province ; together with all the islands in the Ottawas river, wholly or in greater part opposite thereto. 4. The district of Newcastle, embracing the counties of Northumberland and Durham, with all the land behind them, confined between their extreme boundaries, prolonged north sixteen degrees west, until they intersect the northern limits of the province. 5. The home district, comprehending the counties of York and Simcoe. 6. The district of Niagara, embracing the counties of Lincoln and Haldimand, with such of the islands lying in the river Niagara or lake Erie as are wholly or in greater

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part adjacent thereto; together with the beach at the head of Lake Ontario, between the outlet of Burlington Bay and the township of Saltfleet, together with the promontory between Burlington Bay and Coote's Paradise. 7. The district of London, comprehending the counties of Norfolk, Oxford, and Middlesex, with so much of the province as lies to the westward of the home district, and the district of Niagara, to the southward of Lake Huron, and between them and a line drawn due north, from a fixed boundary (where the easternmost limit of the township of Oxford intersects the river Thames), till it arrives at lake Huron. 8. The western district, comprehending the counties of Essex and Kent, together with so much of the province as is not included within any other district thereof."

Religion.

The religion is the Roman Catholic, but the British settlers follow their own modes of worship. There are only twelve clergymen of the church of England, including the bishop of Quebec; while the Catholic

Government.

clergy are 126. By an act passed in 1791, a legislative council, and an assembly, are appointed for each of the provinces of Upper and Lower Canada, having power to make laws with the consent of the governor; but the king may declare his dissent at any time within two years after receiving any bill. The legislative council is to consist of seven members for Upper Canada, and fifteen for the Lower province, summoned by the governor under the king's authority, and nominated during their lives, except forfeited by an absence of four years, or by paying allegiance to a foreign power. The house of assembly is to consist of fifty members from Lower Canada, and sixteen from Upper Canada, chosen by the freeholders in the towns and districts. These councils are to assemble at least once every year; and the house of assembly continues four years, except in case of prior dissolution. "The governor, together with such of the executive council as shall be appointed by the king for the affairs of each province, are to be a court of civil jurisdiction for hearing and determining appeals; subject however to such appeals from their sentence as heretofore existed. All lands in Upper Canada are to be granted hereafter in free and common socage; and also in Lower Canada, when the grantee shall desire it, subject nevertheless to altera-

* Boukon's Sketch of Upper Canada, chap. iv. p. 15.

tions by an act of the legislature. British America is superintended by CANADA. an officer styled Governor General of the four British provinces in North America, who, besides other powers, is commander in chief of all the British troops in the four provinces, and the governments attached to them, and Newfoundland. Each of the provinces has a lieutenant governor, who, in the absence of the governor general, has all the powers requisite to a chief magistrate."¹

The population of the two Canadas, according to an actual enumeration ordered by general Haldimand in 1784, amounted to 113,012 Population. French and English, exclusive of 10,000 loyalists in the upper parts. The savages may perhaps amount to 30,000. It is probable that the population has increased since that period; and certainly would greatly increase, if the favourable representations of Mr. Weld were credited. The only revenue arising to Great Britain from this colony seems to Revenues. proceed from an advantageous commerce, which is said to employ about seven thousand tons of shipping. The expences of the civil list are supposed to be 25,000*l.* of which half is paid by Great Britain, and the other by the provinces, from duties on the importation of spirits, wine, and a few other articles. The military establishment, with repairs of forts, &c. is stated at 100,000*l.*; and the like sum for presents to the savages, and salaries to officers employed among them for trade, &c. in Upper Canada. But the advantages of the commerce are thought to counterbalance these expences.

The manners and customs of the settlers in Canada are considerably Manners and Customs. tinged with the French gaiety and urbanity, blended with the usual portion of vanity, which is however a far more laudable quality than avarice, which is destructive of every generous motive and noble exertion. The French women in Canada can generally read and write, and are thus superior to the men; but both are sunk in ignorance and superstition, and blindly devoted to their priests. They universally use the Languages. French language, English being restricted to the few British settlers.

"The houses for the most part are built of logs; but they are much more compact and better built than those in the United States: the logs are made to fit more closely together, and instead of being left rough and

¹ Morfe, 114.

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uneven on the outside, are planed and white-washed. At the inside also the walls are generally lined with deal boards, whereas in the United States the common log-houses are left as rough within as they are without. One circumstance, however, renders the Canadian houses very disagreeable; and that is, the inattention of the inhabitants to air them occasionally by opening the windows, in consequence of which they have a close heavy smell within doors. As we travelled by land from Quebec to Montreal, we scarcely observed ten houses the whole way with the windows open, notwithstanding that the weather was very warm. If you ask the people why they don't let a little fresh air into their houses, their constant answer is, as it is to all questions of a similar tendency, "*Ce n'est pas la maniere des habitans.*"—It is not the custom of the people of the country.

"Some of the lower classes of the French Canadians have all the gaiety and vivacity of the people of France; they dance, they sing, and seem determined not to give way to care; others, to appearance, have a great deal of that fullness and bluntness in their manners characteristic of the people of the United States; vanity, however, is the ascendant feature in the character of all of them, and by working upon that you may make them do what you please. Few of the men can read or write; the little learning there amongst the inhabitants is confined to the women: a Canadian never makes a bargain, or takes any step of importance, without consulting his wife, whose opinion is generally abided by. Both men and women are sunk in ignorance and superstition, and blindly devoted to their priests. The following anecdote may serve to shew how much they are so.

"On the evening before we reached Quebec, we stopped at the village of St. Augustin Calvaire, and after having strolled about for some time, returned to the farm-house where we had taken up our quarters for the night. The people had cooked some fish that had been just caught, while we had been walking about, and every thing being ready on our return, we sat down to supper by the light of a lamp, which was suspended from the ceiling. The glimmering light, however, that it afforded, scarcely enabled us to see what was on the table; we complained of it to the man of the house, and the lamp was in consequence trimmed;

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it was replenished with oil, taken down, and set on the table; still the light was very bad. "Sacre Dieu," exclaimed he, "but you shall not eat your fish in the dark;" so saying, he stepped aside to a small cupboard, took out a candle, and having lighted it, placed it beside us. All was now going on well, when the wife, who had been absent for a few minutes, suddenly returning, poured forth a volley of the most terrible execrations against her poor husband for having presumed to have acted as he had done. Unable to answer a single word, the fellow stood aghast, ignorant of what he had done to offend her; we were quite at a loss also to know what could have given rise to such a sudden storm: the wife, however, snatching up the candle, and hastily extinguishing it, addressed us in a plaintive tone of voice, and explained the whole affair. It was the holy candle—"La chandelle benite," which her giddy husband had set on the table; it had been consecrated at a neighbouring church, and supposing there should be a tempest at any time, with thunder and lightning ever so terrible, yet if the candle were but kept burning while it lasted, the house, the barn, and every thing else belonging to it, were to be secured from all danger. If any of the family happened to be sick, the candle was to be lighted, and they were instantly to recover. It had been given to her that morning by the priest of the village, with an assurance that it possessed the miraculous power of preserving the family from harm, and she was confident that what he told her was true. To have contradicted the poor woman would have been useless; for the sake of our ears, however, we endeavoured to pacify her, and that being accomplished, we sat down to supper, and e'en made the most of our fish in the dark."

The chief town is Quebec, built on a lofty point of land on the north-west side of the great river St. Lawrence; which in the neighbourhood is sufficiently deep and spacious to float more than one hundred sail of the line. The upper town, on a rock of limestone, is of considerable natural strength, and well fortified; but the lower town, towards the river, is open to every attack. Montcalm's vain confidence, in marching out of the city, led to his destruction, while a siege must have been dissolved by the approach of winter, when it was impracticable to

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¹ Weld's Travels, p. 240.

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form any works: yet Quebec might, in the new procedures of war, yield, like Holland, to a frozen campaign. A large garrison is maintained; but five thousand soldiers would be necessary to man the works. The inhabitants are supposed to be ten thousand, about two-thirds being French; and the presence of the governor, courts, and garrison, conspire to render it gay and lively. The lower town is mostly inhabited by traders and mariners. The houses are commonly of stone, small, ugly, and inconvenient; but the new part of the governor's house, for there is no citadel, is upon an improved plan. The monasteries are almost extinct; yet there are three nunneries. The market is well supplied; and the little carts are often drawn by dogs. The vicinity presents most sublime and beautiful scenery; and the falls of the river Montmorenci are particularly celebrated.

"The scenery that is exhibited to view, from various parts of the upper town of Quebec, for its grandeur, its beauty, and its diversity, surpasses all that I have hitherto seen in America, or indeed in any other part of the globe. In the variegated expanse that is laid open before you, stupendous rocks, immense rivers, trackless forests, and cultivated plains, mountains, lakes, towns, and villages, in their turns strike the attention, and the senses are almost bewildered in contemplating the vastness of the scene. Nature is here seen on the grandest scale; and it is scarcely possible for the imagination to paint to itself any thing more sublime than are the several prospects presented to the sight of the delighted spectator. From Cape Diamond, situated one thousand feet above the level of the river, and the loftiest part of the rock on which the city is built, the prospect is considered by many as superior to that from any other spot: a greater extent of country opens upon you, and the eye is here enabled to take in more at once than at any other place; but to me it appears, that the view from the cape is by no means so fine as that, for instance, from the battery; for in surveying the different objects below you from such a stupendous height, their magnitude is in a great measure lost, and it seems as if you were looking at a draught of the country more than at the country itself. It is the upper battery that I allude to, facing the basin, and is about three hundred feet above the level of the water. Here, if you stand but a few yards from the edge

of the precipice, you may look down at once upon the river, the vessels CANADA. upon which, as they sail up to the wharfs before the lower town, appear as if they were coming under your very feet. The river itself, which is between five and six miles wide, and visible as far as the distant end of the island of Orleans, where it loses itself amidst the mountains that bound it on each side, is one of the most beautiful objects in nature, and on a fine still summer's evening it often wears the appearance of a vast mirror, where the varied rich tints of the sky, as well as the images of the different objects on the banks, are seen reflected with inconceivable lustre. The southern bank of the river, indented fancifully with bays and promontories, remains nearly in a state of nature, clothed with lofty trees; but the opposite shore is thickly covered with houses, extending, as along other parts of the river already mentioned, in one uninterrupted village, seemingly as far as the eye can reach. On this side the prospect is terminated by an extensive range of mountains; the flat lands situated between the villages on the banks not being visible to a spectator at Quebec, it seems as if the mountains rose directly out of the water, and the houses were built on their steep and rugged sides.

" Beautiful as the environs of the city appear when seen at a distance, they do not appear less so on a more close inspection; and in passing through them the eye is entertained with a most pleasing variety of fine landscapes, whilst the mind is equally gratified with the appearance of content and happiness that reigns in the countenances of the inhabitants. Indeed, if a country as fruitful as it is picturesque, a genial and healthy climate, and a tolerable share of civil and religious liberty, can make people happy, none ought to appear more so than the Canadians, during this delightful season of the year.

" Before I dismiss this subject entirely, I must give you a brief account of two scenes in the vicinity of Quebec, more particularly deserving of attention than any others. The one is the fall of the river Montmorenci, the other that of the Chaudiere. The former stream runs into the St. Lawrence, about seven miles below Quebec; the latter joins the same river nearly at an equal distance above the city.

" The Montmorenci river runs in a very irregular course, through a wild and thickly wooded country, over a bed of broken rocks, till it

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comes to the brink of a precipice, down which it descends in one uninterrupted and nearly perpendicular fall of two hundred and forty feet. The stream of water in this river, except at the time of floods, is but scanty, but being broken into foam by rushing with such rapidity as it does over the rocks at the top of the precipice, it is thereby much dilated, and in its fall appears to be a sheet of water of no inconsiderable magnitude. The breadth of the river at top, from bank to bank, is about fifty feet only. In its fall, the water has the exact appearance of snow, as when thrown in heaps from the roof of a house, and it seemingly descends with a very slow motion. The spray at the bottom is considerable, and when the sun happens to shine brightly in the middle of the day, the prismatic colours are exhibited in all their variety and lustre. At the bottom of the precipice the water is confined in a sort of a basin, as it were, by a mass of rock, extending nearly across the fall, and out of this it flows with a gentle current to the St. Lawrence, which is about three hundred yards distant. The banks of the Montmorenci, below the precipice, are nearly perpendicular on one side, and on both inaccessible, so that if a person be desirous of getting to the bottom of the fall, he must descend down the banks of the St. Lawrence, and walk along the margin of that river till he comes to the chasm through which the Montmorenci flows. To a person sailing along the St. Lawrence, past the mouth of the chasm, the fall appears in great beauty.

“General Haldimand, formerly governor of Canada, was so much delighted with this cataract, that he built a dwelling-house close to it, from the parlour windows of which it is seen in a very advantageous point of view. In front of the house is a neat lawn, that runs down the whole way to the St. Lawrence, and in various parts of it little summer-houses have been erected, each of which commands a view of the fall. Here is also a summer-house, situated nearly at the top of the fall, hanging directly over the precipice, so that if a bullet were dropped from the window, it would descend in a perpendicular line at least two hundred feet. This house is supported by large beams of timber, fixed into the sides of the chasm, and in order to get to it you have to pass over several flights of steps, and one or two wooden galleries, which are supported in the same manner. The view from hence is tremendously grand. It is said

that the beams whereon this little edifice is erected are in a state of decay, CANADA. and many persons are fearful of entering into it, lest they should give way; but being ignorant of the danger, if indeed there was any, our whole party ventured into it at once, and staid there a considerable time, notwithstanding its tremulous motion at every step we trod. That the beams cannot last for ever is certain; it would be a wise measure, therefore, to have them removed or repaired in proper time, for as long as they remain standing, persons will be found that will venture into the unsteady fabric they support, and should they give way at a moment when any persons are in it, the catastrophe must inevitably be fatal.

"The fall in the river Chaudiere is not half the height of that of the Montmorenci, but then it is no less than two hundred and fifty feet in breadth. The scenery round this cataract is much superior in every respect to that in the neighbourhood of the Montmorenci. Contiguous to the latter there are few trees of any great magnitude, and nothing is near it to relieve the eye; you have the fall, and nought but the fall, to contemplate. The banks of La Chaudiere, on the contrary, are covered with trees of the largest growth, and amidst the piles of broken rocks, which lie scattered about the place, you have some of the wildest and most romantic views imaginable. As for the fall itself its grandeur varies with the season. When the river is full, a body of water comes rushing over the rocks of the precipice that astonishes the beholder; but in dry weather, and indeed during the greater part of the summer, we may say, the quantity of water is but trifling. At this season there are few but what would prefer the falls of the Montmorenci river, and I am tempted that, upon the whole, the generality of people would give it the preference at all times."*

Montreal is a neat town, on the east side of a considerable island, Montreal. formed by the river St. Lawrence at its junction with the river Utawas, which is the boundary between Lower and Upper Canada, about 150 miles above Quebec. This is the utmost point to which ships can ascend from the sea; but several of the burden of 400 tons reach Montreal by a tedious and difficult navigation. This town contains about twelve hundred houses, and probably six thousand souls; with six churches, four of which are Roman Catholic, and four convents. The chief trade is

* Weld's Travels, p. 251.

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in furs, which are thence sent to Canada for England. The North-west Company consists of merchants of Montreal. The canoes are chiefly employed on the Utawas, whence the fur traders proceed across to lake Winnipeg. Mr. Mackenzie was a partner in the North-west Company, which has considerably lessened the trade of that of Hudson's Bay. La Prairie is a village on the opposite side of the river to Montreal.

York.

" York is the seat of government of Upper Canada, and lies in about 43 degrees and 35 minutes north latitude. It is situated within an excellent harbour of the same name, made by a long peninsula, which embraces a basin of water sufficiently large to contain a considerable fleet. Vessels may ride safely at its entrance during the winter. On the extremity of the peninsula, which is called Gibraltar Point, are erected commodious block houses and stores, commanding the entrance to the harbour. On the main land, opposite to the Point, is the garrison, situated on a point, made by the harbour and a small rivulet, which, being improved by sluices, affords an easy access for boats to go up to the stores. The barracks being built on a knoll, are well situated for health, and command a delightful prospect of the lake to the west, and the harbour to the east. The government-house, which is now finished, has a striking appearance from the lake, and is well calculated for the residence of a governor. Its situation is commanding, about two miles above the garrison, near the head of the harbour. The town is much increased within the last two or three years, and several very good houses have been built by the different officers of government. The society of the place is highly respectable, and its hospitality is experienced by every visitor. The public buildings, where the Legislative Council, House of Assembly, and Courts of Law are to sit, are not yet finished. The gaol is a tolerable building, and in a healthy situation. The town is not large, but well furnished with every necessary convenience, and the market is well supplied. Beef, mutton, venison, fish, &c. in abundance, and as good as in any part of the world. There are several very respectable private stores, but goods are rather high. The usual supply is from Montreal, so that after the expence of boats from Montreal to Kingston, they have to incur the additional expence of storage at Kingston, and freight across the lake to York. This must account also for the extra-

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vagant price of labour at York, which seems to be a great inconvenience CANADA. to the inhabitants. The land around York is in general sandy, but bears very good crops of almost every description. A few miles back the land is much stronger. The plan of the town, as now laid out, is one mile and a half in length. The streets are tolerably uniform, and exhibit a handsome prospect from the lake. The river Don empties itself into the harbour a little above the town, running through a marsh which, when drained, will afford most beautiful and valuable meadows. This has already been effected in a small degree, and will no doubt be extended; the difficulty is not very great, and from the contiguity of the marsh to the town, the expence, though heavy, may be supplied. The long beach, or peninsula, affords a most delightful ride or walk, and is considered as so healthy by the Indians, that they frequently resort to it when indisposed. Youge-street, or the military way which leads to lake Simcoe, and from thence to Gloucester, on lake Huron, commences at the back of the town. This great communication has been opened to Gwilliamsbury, between thirty and forty miles, and is calculated to attract the attention of the north-west company. It is considerably shorter than the route by the streights of Niagara and Detroit. Farms are laid out on each side of Youge-street, having the width of a quarter of a mile each. A farm or lot comprehends two hundred acres: the land in general is excellent, and from its situation will soon be thickly settled. There have been very liberal subscriptions in the town of York, for the improvement of the road through Youge-street, and two or three miles are finished in a very judicious manner. In a very few years this will doubtless be a most valuable country, and of infinite importance to the seat of government."

At the grand egress of the river St. Lawrence, on the lake Ontario, near what is called the lake of a thousand islands, stands the town of Kingston, more remarkable from its position than any other circumstance. The forts of Niagara and Detroit belong to the southern side of the boundary.* The little town of Trois Rivières, or Three Rivers, stands

* Boulton's Sketch of Upper Canada, chap. viii. p. 44.

* See Weld, vol. ii. p. 64, &c. Kingston contains about a hundred houses, inhabited by emigrants from the United States, and there is a stone fort, erected in 1672. The trade in furs is considerable.

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stands between Quebec and Montreal, and is chiefly remarkable for the resort of the savages: but though it contain little more than 250 houses, it is considered as the third town in British America.¹ Sorelle was founded in 1787 for the American loyalists, but contains only one hundred scattered houses: it is at the distance of fifteen leagues from Montreal towards Quebec; and the chief business is ship building.

Manufactures
& Commerce.

The principal exports are furs and peltries, with some fish, potash, and American ginseng.* The imports are spirits, wines, tobacco, sugar, salt, and provisions for the troops. Except some linen, and coarse woollen cloths, manufactured articles are chiefly imported from England.

The commerce of this country depends chiefly on the river St. Lawrence, and the following observations will be found important, though the author be inclined to magnify the advantages of Canada.

"The following table shews for what vessels the St. Lawrence is navigable in different places; and also points out the various breadths of the river from its mouth upwards:

Names of Places.				Dist. in Miles ascending.	Breadth in Miles.
At its mouth	-	-	-	—	90
At Cape Cat	-	-	-	140	30
At Sanguenay River	-	-	-	120	18

considerable. The hamlet of Newark stands on the British side of the river Niagara, being once the capital of Upper Canada; and though Detroit town and fort be assigned to the Americans, there is a British settlement at no great distance, on the opposite side of the river. *Ib.* 170.

¹ Weld, ii. 11.

* Mr. Mackenzie has given an interesting history of the fur trade, which led to the inland discoveries in North America. In 1766 Curry penetrated as far as fort Bourbon on the Saskatchewan, or river Bourbon of the French. Peter Pond is said to have discovered the Slave lake about 1780. The North-west Company was formed in 1784. In 1798 the beaver skins exported were 106,000, and other furs in proportion. The French terms are generally retained. Mr. M. proposes, p. 409, that the Hudson's Bay Company should resign their monopoly, as being conducted on a narrow scale, and with little benefit to the public. The slow progress of discovery seems to evince the justice of his observation, and the map of N. America privately engraved for their use 1740, would disgrace the knowledge of 1540, being perhaps the most remarkable monument of geographical ignorance that ever appeared. Mr. Burke, in his History of the American Settlements, ii. 288, has expressed strong opposition to the monopoly of this company.

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Names of Places.	Dist. in Miles ascending.	Breadth in Miles.	CANADA.
At the lower extremity of the Isle of Orleans - - - -	110	15 *	
At the basin between the Isle of Orleans and Quebec - - - -	30	5 †	
From Quebec to Lake St. Pierre - - - -	90		
Lake St. Pierre - - - -	30	14	
To La Valterie - - - -	10	1	
To Montreal - - - -	30	2 to 4 ‡	
To Lake St. Louis - - - -	6	‡	
Lake St. Louis - - - -	12	4	
To Lake St. Francis - - - -	25	‡ to 2	
Lake St. Francis - - - -	20	5	
To the Lake of a Thousand Isles - - - -	90	‡ to 1	
Lake of a Thousand Isles - - - -	25	6	
To Kingston, on Lake Ontario - - - -	15	2‡ to 6	

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" During the whole of its course the St. Lawrence is navigable for bateaux of two tons burthen, except merely at the rapids above Montreal, at the Fall of the Thicket, and at the Long Fall, where, as has been already pointed out, it is necessary to lighten the bateaux, if heavily laden. At each of these places, however, it is possible to construct canals, so as to prevent the trouble of unlading any part of the cargoes of the bateaux, and at a future day, when the country becomes rich, such canals no doubt will be made.

" Although the lakes are not immediately connected with the Atlantic ocean by any other river than the St. Lawrence, yet there are several streams that fall into the Atlantic, so nearly connected with others flow-

* This island is 25 miles in length and six in breadth; the river on each side is about two miles wide.

† Thus far, 400 miles from its mouth, it is navigable for ships of the line with safety.

‡ To this place, 560 miles, it is navigable with perfect safety for ships drawing 14 feet water. Vessels of a much larger draught have proceeded many miles above Quebec, but the channel is very intricate and dangerous.

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ing into the lakes, that by their means trade may be carried on between the ocean and the lakes. The principal channels for trade between the ocean and the lakes are four in number; the first, along the Mississippi and the Ohio, and thence up the Wabash, Miami, Muskingud, or the Alleghany rivers, from the head of which there are portages of from one to eighteen miles to rivers that fall in Lake Erie; secondly, along the Patowmac river, which flows past Washington, and from thence along Cheat river, the Monongahela and Alleghany rivers, and French Creek, to Presqu' Isle, on Lake Erie; thirdly, along Hudson's river, which falls into the Atlantic at New York, and afterwards along the Mohawk river, Wood Creek, Lake Oneido, and Oswego river, which last falls into Lake Ontario; fourthly, along the St. Lawrence.

"The following is a statement of the entire length of each of these channels or routes, and of the lengths of the portages in each, reckoning from the highest sea-port on each river that will receive vessels of a suitable size for crossing the Atlantic to Lake Erie, which is the most central of the lakes to the four ports:

				Length of way in Miles.	Length of the Portages.
From Montreal	-	-	-	440	22
From Washington	-	-	-	450	80*
From New York	-	-	-	500	30
From New Orleans	-	-	-	1,800	1 to 18†

"From this statement it not only appears evident that the St. Lawrence opens a shorter passage to the lakes than any of the other rivers, but also that the portages are shorter than in any of the other routes: the portages are also fewer, and goods may be transported in the same boats the whole way from Montreal to the lakes; whereas in conveying goods thither, either from Washington or New York, it is necessary to employ different boats and men on each different river, or else to transport the boats themselves on carriages over the portages from one river to another. It is always an object of importance to avoid a portage, as

* When the navigation is opened, this will be reduced, it is said, to 50 miles.

† According to the route followed from the Ohio to the Lake.

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by every change in the mode of conveyance the expence of carriage is increased, and there is an additional risk of pillage from the goods passing through the hands of a greater number of people. Independent of these considerations, the St. Lawrence will, on another account, be found a more commodious channel than any other for the carrying on of trade between the ocean and the lakes. Constantly supplied from that immense reservoir of water, Lake Ontario, it is never so low, even in the driest season, as not to be sufficiently deep to float laden bateaux. The small streams, on the contrary, which connect Hudson's River, the Patowmac, and the Mississippi with the lakes, are frequently so dried up in summer time, that it is scarcely possible to pass along them in canoes. For upwards of four months in the summer of 1796, the Mohawk river was so low, that it was totally impracticable to transport merchandise along it during the greater part of its course, and the traders in the back country, after waiting for a length of time for the goods they wanted, were under the necessity at last of having them forwarded by land carriage. The navigation of this river, it is said, becomes worse every year, and unless several long canals are cut, there will be an end to the water communication between New York and Lake Ontario by that route. The Alleghany River and French Creek, which connect the Patowmac with Lake Erie, are equally affected by droughts; indeed it is only during floods, occasioned by the melting of the snow, or by heavy falls of rain, that goods can be transported with ease either by the one route or the other.

" By far the greater part of the trade to the lakes is at present centered at Montreal; for the British merchants not only can convey their goods from thence to the lakes for one-third less than what it costs to convey the same goods thither from New York, but they can likewise afford to sell them, in the first instance, considerably cheaper than the merchants of the United States. The duties paid on the importation into Canada of refined sugar, spirits, wine, and coffee, are considerably less than those paid on the importation of the same commodities into the United States; and all British hardware, and dry goods in general, are admitted duty free into Canada, whereas, in the United States, they are chargeable, on importation from Europe, with a duty of fifteen per cent. on

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the value. To attempt to levy duties on foreign manufactures sent into the States from Canada would be an idle attempt, as from the great extent of their frontier, and its contiguity to Canada, it would at all times be an easy matter to send the goods clandestinely into them, in order to avoid the duties.

"The trade carried on from Montreal to the lakes is at present very considerable, and increasing every year. Already are there extensive settlements on the British side of Lake Ontario, at Niagara, at Toronto, at the bay of Canti, and at Kingston, which contain nearly twenty thousand inhabitants; and on the opposite shore, the people of the States are pushing forward their settlements with the utmost vigour. On Lake Erie, and along Detroit River also, the settlements are increasing with astonishing rapidity, both on the British and on the opposite side.

"The importance of the back country trade (and the trade to the lakes is in fact the back country trade) has already been demonstrated; and it has been shewn, that every sea port town in the United States has increased in size in proportion to the quantum it enjoyed of this trade; and that those towns most conveniently situated for carrying it on, were those that had the greatest share of it; as, therefore, the shores of the lake increase in population, and of course as the demand for European manufactures increases amongst the inhabitants, we may expect to see Montreal, which of all the sea-ports in North America is the most conveniently situated for supplying them with such manufactures, increase proportionably in size; and as the extent of back country it is connected with, by means of water, is as great, and also as fertile as that with which any of the large towns of the United States are connected, it is not improbable but that Montreal, at a future day, will rival in wealth and in size the greatest of the cities on the continent of North America."*

Climate and
Seasons.

Mr. Weld, who is a great admirer of ice, depicts the Canadian climate in the most favourable colours, and would persuade us that, though considerably further to the north, it is at least equal to that of New England. But even by his account the extremes of heat and cold are amazing; the thermometer in July and August rising to 96, while

* Weld's Travels, p. 337.

in winter the mercury freezes, though this last circumstance be very CANADA. doubtful. The snow begins in November; and in January the frost is so intense that it is impossible to be out of doors for any time without the risk of what is called a frost-bite, which endangers the limb: and the warm intervals only increase the sensation and the jeopardy. But winter, as at Petersburg, is the season of amusement; and the sledges, drawn by one or two horses, afford a pleasant and speedy conveyance. Several stoves are placed in the hall, whence flues pass to the apartments; and there are double windows and doors. On going abroad the whole body is covered with furs, except the eyes and nose. In May the thaw generally comes suddenly, the ice on the river bursting with the noise of cannon, and its passage to the sea is terrific, especially when a pile of ice crashes against a rock. Spring is summer: and vegetation instantaneous. The month of September is one of the most pleasant.

In 1663 a remarkable earthquake * occurred, of which the following account is transcribed from a recent author; but it is to be regretted that he has not minutely specified his authorities.

"On the 5th of February, about half an hour past four in the evening, a great noise was heard nearly at the same time throughout the whole extent of Canada. That noise seems to have been the effect of a sudden vibration of the air agitated in all directions. It appeared as if the houses were on fire, and the inhabitants, in order to avoid its effects, immediately ran out of doors. But their astonishment was increased when they saw the buildings shaken with the greatest violence, and the roofs disposed to fall, sometimes on one side sometimes on the other. The doors opened of themselves and shut again with a great crash. All the bells were sounding although no person touched them. The palliades of the fences seemed to bound out of their places, the walls were rent, the planks of the floor separated, and again sprung together. The

* This earthquake is said to have overwhelmed a chain of free-stone mountains more than 300 miles long. Morfe, p. 62, from the American Museum, iii. 292. It is to be wished that this fact were better substantiated; and such a scene could hardly have escaped the notice of recent travellers. Frezier mentions this earthquake in his Voyage to Chili, but quotes a doubtful authority, the life of a French saint, who lived in Canada, *Marie de l'Incarnation* (Paris 1677). The Journal des Savans, 1678, also founds on this life. Dr. Barton however asserts, in his notes on an American edition of this geography, p. 484, vol. ii. that New England and New York were violently shaken by this earthquake.

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dogs answered these previous tokens of a general disorder of nature by lamentable howlings. The other animals sent forth the most terrific groans and cries, and by a natural instinct extended their legs to prevent them from falling. The surface of the earth was moved like an agitated sea. The trees were thrown against each other, and many, torn up by the roots, were tossed to a considerable distance.

" Sounds of every description were then heard ; at one time like the fury of a sea which had overflowed its barriers ; at another like a multitude of carriages rolling over a pavement ; and again like mountains of rock or marble opening their bowels and breaking into pieces with a tremendous roar. Thick clouds of dust, which at the same time arose, were taken for smoke, and for the symptoms of an universal conflagration.

" The consternation became so general, that not only men, but the animals appeared as if struck with thunder : they ran in every quarter, without a knowledge of their course, and wherever they went they encountered the danger they wished to avoid. The cries of children, the lamentations of women, the alternate successions of fire and darkness in the atmosphere, all combined to aggravate the evils of a dire calamity, which subverts every thing by the excruciating tortures of the imagination distressed and confounded, and losing, in the contemplation of this general confusion, the means of self-preservation.

" The ice which covered the St. Lawrence and the other rivers broke into pieces, which crashed against each other ; large bodies of ice were thrown up into the air, and from the place which they had quitted, a quantity of sand, and slime, and water spouted up. The sources of several springs and little rivers became dry ; the waters of others were impregnated with sulphur. At some times the waters appeared red, at others of a yellowish cast ; those of the St. Lawrence became white from Quebec to Tadoussac, a space of thirty leagues : the quantity of matter necessary to impregnate so vast a body of waters must have been prodigious. In the mean time the atmosphere continued to exhibit the most awful phenomena ; an incessant rushing noise was heard, and the fires assumed every species of form. The most plaintive voices augmented the general terror and alarm. Porpusses and sea-cows were heard howling

ing in the water at Three Rivers, where none of these fishes had ever before been found; and the noise which they sent forth resembled not that of any known animal. CANADA.

"Over the whole extent of three hundred leagues from east to west, and one hundred and fifty from south to north, the earth, the rivers, and coasts of the ocean experienced for a considerable time, although at intervals, the most dreadful agitation.

"The first shock continued without interruption for half an hour; about eight o'clock in the evening there came a second, no less violent than the first; and in the space of half an hour were two others. During the night were reckoned thirty shocks.

"New England and New York were not more exempted from its effects than the country of New France; and over this tract of land and rivers, when the violence of the shocks had abated, an intermitting movement was felt every where at the same period.

"It appears wonderful, that in so extraordinary a derangement of nature, which lasted for six months, no human inhabitant should have perished, and no contagion should have succeeded: the country soon afterwards resumed its wonted form and tranquillity. Although in some memoirs it is stated that the Great River, with respect to its banks and some parts of its course, underwent remarkable changes, that new islands were formed, and others considerably enlarged, of this circumstance there does not however appear to have existed a probability. The river bears no marks of having suffered thereby any interruption or change in its course from lake Ontario to Tadoussac. The rapids of St. Louis, at Montreal, and the several islands, remain in the same state as when Jacques Cartier first visited them. It is observed elsewhere in this work, that there are evident tokens of the St. Lawrence having, at some period, separated its waters at Cape Rouge, flowed to the eastward through the level country, and re-united at the foot of the promontory of Quebec, insulating the lofty ground from Cape Rouge to that place; but the alteration of its ceasing to flow through that channel had probably taken effect long before America had been visited by Europeans. It is also remarked in another part of this work, that at St. Paul's Bay, Mal Bay, and Camomaska, which are subject to partial earthquakes,

CANADA. there are undoubted proofs of the once powerful operation of such natural convulsions." *

Face of the Country.

Soil and Agriculture.

The face of the country is generally mountainous and woody; but there are savannas, and plains of great beauty, chiefly towards Upper Canada. In the lower province the soil mostly consists of a loose blackish earth of ten or twelve inches, incumbent on cold clay. This thin mould is however very fertile, and manure was seldom or never used by the French settlers; but of late marl has been employed, and is found in considerable quantities on the shores of the river St. Lawrence. A little tobacco is cultivated for private use, with many culinary vegetables, and considerable crops of grain, wheat being reckoned among the exports: a kind of vine is indigenous, but the grapes are four, and little larger than currants.† Raspberries are also indigenous; and there are good currants and gooseberries. A great variety of trees is found in the forests; beech, oak, elm, ash, pine, sycamore, chestnut, walnut, &c. The sugar maple tree also abounds, and the sugar is generally used in the country. Of this tree there are two kinds, the swamp and the mountain maple. Mr. Weld points out some difficulties in the tenures of land which ought to be removed, and in such a climate there is no occasion for a barrier against colonization.

Rivers.
Utawas.

The great river St. Lawrence has been already described in the general view of North America. The Utawas is the most important of all its tributary streams, issuing from various lakes, towards the centre of Canada: its waters are of a bright greenish colour, while the St. Lawrence is muddy. Many rivers of smaller consequence flow into the river St. Lawrence from the north. The large lakes have been also already mentioned: there are many others, of which the enumeration would be tedious; and some difficulty arises from the want of any precise boundary in the north of Canada.

Lakes.

Mountains.

Nor have the mountains been examined by any geologist, who could indicate their ranges or illustrate their structure. The chief ridge seems to be in the northern part of the province, in a direction S. W. and N. E. giving source to the many streams which flow S. E. while a few

* Heriot's History of Canada, i. 99.

† Weld, i. 381. This kind of vine probably gave name to the Norwegian Vinland.

pass to Hudson's Bay. But there are many mountains between Quebec and the sea, while towards the Utawas only a few are scattered, and to the S. W. there are ample plains.

The botany differs little from that of the United States: and the chief singularities in Zoology are the moose, the beaver, and some other animals, for which Mr. Pennant's Arctic Zoology may be consulted. The rein-deer appears in the northern part, and the puma and lynx are not unknown. Both the Canadas are much infested with rattlesnakes. The humming bird is not uncommon at Quebec.*

The mineralogy is of little consequence; and even iron seems to be rare. There are said to be lead mines which produce some silver;* and it is probable that copper may be found, as it appears in the S. W. of Lake Superior. Coal abounds in the island of Cape Breton, but this valuable mineral has not been discovered in Canada. If so wide a territory were properly examined by skilful naturalists, which ought always to be a primary care with every government for the most advantageous position of settlements, and that every advantage may be secured, it is highly probable that important discoveries might be made.

Little is said of warm springs, or mineral waters; and the chief natural curiosities seem to be the grand lakes, rivers, and cataracts. Among the latter the celebrated falls of Niagara are chiefly on the side of Upper Canada, the river being there 600 yards wide, and the fall 142 feet. A small island lies between the falls: and that on the side of the States is 350 yards wide, while the height is 163 feet: from the great fall a constant cloud ascends, which may sometimes be seen at an incredible distance; and the whole scene is truly tremendous.†

The omission of a more minute description of this grand scene, one of the most striking and sublime on the face of the globe, was reproached as a defect in this work, and is therefore supplied at due length in the words of an intelligent spectator, always more impressive than a reduced abstract.

* Kalm, ii. 253.

* See Kalm, ii. 349, for an account of these veins near the bay of St. Paul, N. E. of Quebec. There are only some grains of galena in a kind of spar.

† Volney says that, at the cataract of Niagara, the rock is primitive limestone.

Natural
Curiosities.

Falls of
Niagara.

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CANADA.

" At the distance of eighteen miles from the town of Niagara, or Newark, are those remarkable falls in Niagara river, which may justly be ranked amongst the greatest natural curiosities in the known world. The road leading from Lake Ontario to Erie runs within a few hundred yards of them. This road, which is within the British dominions, is carried along the top of the lofty steep banks of the river: for a considerable way it runs close to their very edge, and in passing along it the eye of the traveller is entertained with a variety of the most grand and beautiful prospects. The river, instead of growing narrow as you proceed upwards, widens considerably: at the end of nine or ten miles it expands to the breadth of a mile, and here it assumes much the appearance of a lake; it is enclosed, seemingly on all sides, by high hills, and the current, owing to the great depth of the water, is so gentle as to be scarcely perceptible from the top of the banks. It continues thus broad for a mile or two, when on a sudden the waters are contracted between the high hills on each side. From hence up to the falls the current is exceedingly irregular and rapid. At the upper end of this broad part of the river, and nearly at the foot of the banks, is situated a small village, that has been called Queenstown, but which in the adjacent country is best known by the name of " The Landing." The lake merchant vessels can proceed up to this village with perfect safety, and they commonly do so, to deposit, in the stores there, such goods as are intended to be sent higher up the country, and to receive in return the furs, &c. that have been collected at the various posts on Lakes Huron and Erie, and sent thither to be conveyed down to Kingston, across Lake Ontario. The portage from this place to the nearest navigable part of Niagara river, above the falls, is nine miles in length.

" About half way up the banks, at the distance of a few hundred yards from Queenstown, there is a very extensive range of wooden barracks, which, when viewed a little way off, appears to great advantage; these barracks are now quite unoccupied, and it is not probable that they ever will be used until the climate improves: the first troops that were lodged in them sickened in a very few days after their arrival; many of the men died, and had not those that remained alive been removed,

moved, pursuant to the advice of the physicians, to other quarters, the whole regiment might possibly have perished. CANADA.

" From the town of Niagara to Queenstown, the country in the neighbourhood of the river is very level; but here it puts on a different aspect; a confused range of hills, covered with oaks of an immense size, suddenly rises up before you, and the road that winds up the side of them is so steep and rugged, that it is absolutely necessary for the traveller to leave his carriage, if he should be in one, and proceed to the top on foot. Beyond these hills you again come to an unbroken level country; but the soil here differs materially from that on the opposite side; it consists of a rich dark earth, intermixed with clay, and abounding with stones; whereas, on the side next Lake Ontario, the soil is of a yellowish cast, in some places inclining to gravel, and in others to sand.

" From the brow of one of the hills in this ridge, which overhangs the little village of Queenstown, the eye of the traveller is gratified with one of the finest prospects that can be imagined in nature: you stand amidst a clump of large oaks, a little to the left of the road, and looking downwards, perceive, through the branches of the trees with which the hill is clothed from the summit to the base, the tops of the houses of Queenstown, and in front of the village, the ships moored in the river: the ships are at least two hundred feet below you, and their masts appear like slender reeds peeping up amidst the thick foliage of the trees. Carrying your eye forward, you may trace the river in all its windings, and finally see it disembogue into Lake Ontario, between the town and the fort: the lake itself terminates your view in this direction, except merely at one part of the horizon, where you just get a glimpse of the blue hills of Toronto. The shore of the river on the right hand remains in its natural state, covered with one continual forest; but on the opposite side the country is interspersed with cultivated fields and neat farm houses down to the water's edge. The country beyond the hills is much less cleared than that which lies towards the town of Niagara, on the navigable part of the river.

" From the sudden change of the face of the country in the neighbourhood of Queenstown, and the equally sudden change in the river

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with respect to its breadth, depth, and current, conjectures have been formed that the great falls of the river must originally have been situated at the spot where the waters are so abruptly contracted between the hills; and indeed it is highly probable that this was the case, for it is a fact well ascertained, that the falls have receded very considerably since they were first visited by Europeans, and that they are still receding every year; but of this I shall have occasion to speak more particularly presently.

" It was at an early hour of the day that we left the town of Niagara, or Newark, accompanied by the attorney-general and an officer of the British engineers, in order to visit these stupendous falls. Every step that we advanced towards them our expectations rose to a higher pitch; our eyes were continually on the look out for the column of white mist which hovers over them; and an hundred times, I believe, did we stop our carriage, in hopes of hearing their thundering sound: neither, however, was the mist to be seen, nor the sound to be heard, when we came to the foot of the hills; nor after having crossed over them, were our eyes or ears more gratified. This occasioned no inconsiderable disappointment, and we could not but express our doubts to each other, that the wondrous accounts we had so frequently heard of the Falls were without foundation, and calculated merely to impose on the minds of credulous people that inhabited a distant part of the world. These doubts were nearly confirmed, when we found that after having approached within half a mile of the place, the mist was but just discernible, and that the sound even then was not to be heard; yet it is nevertheless strictly true, that the tremendous noise of the Falls may be distinctly heard, at times, at the distance of forty miles; and the cloud formed from the spray may be even seen still farther off; but it is only when the air is very clear, and there is a fine blue sky, which however are very common occurrences in this country, that the cloud can be seen at such a great distance. The hearing of the sound of the Falls afar off also depends upon the state of the atmosphere; it is observed, that the sound can be heard at the greatest distance just before a heavy fall of rain, and when the wind is in a favourable point to convey the sound toward the listener: the day on which we first approached the falls was thick and cloudy.

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" On that part of the road leading to Lake Erie which draws nearest CANADA, to the falls there is a small village, consisting of about half a dozen straggling houses: here we alighted, and having disposed of our horses, and made a slight repast, in order to prepare us for the fatigue we had to go through, we crossed over some fields towards a deep hollow place surrounded with large trees, from the bottom of which issued thick volumes of whitish mist, that had much the appearance of smoke rising from large heaps of burning weeds. Having come to the edge of this hollow place, we descended a steep bank of about fifty yards, and then walked for some distance over a wet marshy piece of ground, covered with thick bushes, at last came to the Table Rock, so called from the remarkable flatness of its surface, and its bearing some similitude to a table. This rock is situated a little to the front of the great fall, above the top of which it is elevated about forty feet. The view from it is truly sublime; but before I attempt to give any idea of the nature of this view, it will be necessary to take a more general survey of the river and falls.

" Niagara river issues from the eastern extremity of Lake Erie, and after a course of thirty-six miles discharges itself into Lake Ontario, as has already been mentioned. For the first few miles from Lake Erie, the breadth of the river is about three hundred yards, and it is deep enough for vessels drawing nine or ten feet water; but the current is so extremely rapid and irregular, and the channel so intricate, on account of the numberless large rocks in different places, that no other vessels than bateaux ever attempt to pass along it. As you proceed downward the river widens, no rocks are to be seen, either along the shores or in the channel, and the waters glide smoothly along though the current continues very strong. The river runs thus evenly, and is navigable with safety for bateaux as far as Fort Chippeway, which is about three miles above the falls; but here the bed of it again becomes rocky, and the waters are violently agitated by passing down successive rapids, so much so indeed, that were a boat by any chance to be carried a little way beyond Chippeway, where people usually stop, nothing could save it from being dashed to pieces long before it came to the falls. With such astonishing impetuosity do the waves break on the rocks in these

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rapids, that the mere sight of them from the top of the banks is sufficient to make you shudder. I must in this place, however, observe, that it is only on each side of the river that the waters are so much troubled; in the middle of it, though the current is also there uncommonly swift, yet the breakers are not so dangerous but boats may pass down, if dexterously managed, to an island which divides the river at the very falls. To go down to this island it is necessary to set off at some distance above Chippeway, where the current is even, and to keep exactly in the middle of the river the whole way thither; if the boats were suffered to get out of their course ever so little, either to the right or left, it would be impossible to stem the current, and bring them again into it; they would be irresistibly carried towards the falls, and destruction must inevitably follow. In returning from the island there is still more difficulty and danger than in going to it. Notwithstanding these circumstances, numbers of persons have had the fool-hardiness to proceed to this island, merely for the sake of beholding the falls from the opposite side of it, or for the sake of having it in their power to say that they had been upon it.

“ The river forces its way amidst the rocks with redoubled impetuosity as it approaches towards the falls; at last coming to the brink of the tremendous precipice, it tumbles headlong to the bottom, without meeting with any interruption from rocks in its descent. Just at the precipice the river takes a considerable bend to the right, and the line of the falls, instead of extending from bank to bank in the shortest direction, runs obliquely across. The width of the falls is considerably greater than the width of the river, admeasured some way below the precipice. The river does not rush down the precipice in one unbroken sheet, but is divided by islands into three distinct collateral falls. The most stupendous of these is that on the north-western or British side of the river, commonly called the Great or Horse-shoe Fall, from its bearing some resemblance to the shape of a horse-shoe. The height of this is only one hundred and forty-two feet, whereas the others are each one hundred and sixty feet high; but to its inferior height it is indebted principally for its grandeur; the precipice, and of course the bed of the river above it, being so much lower at the one side than at the other, by far

the greater part of the water of the river finds its way to the low side, CANADA and rushes down with greater velocity at that side than it does at the other, as the rapids above the precipice are strongest there. It is from the centre of the Horse-shoe Fall that arises that prodigious cloud of mist which may be seen so far off. The extent of the Horse-shoe Fall can only be ascertained by the eye; the general opinion of those who have most frequently viewed it is, that it is not less than six hundred yards in circumference. The island which separates it from the next fall is supposed to be about three hundred and fifty yards wide; the second fall is about five yards wide; the next island about thirty yards; and the third, commonly called the Fort Schloper Fall, from being situated towards the side of the river on which that fort stands, is judged to measure at least as much as the large island. The whole extent of the precipice, therefore, including the islands, is, according to this computation, thirteen hundred and thirty-five yards. This is certainly not an exaggerated statement. Some have supposed that the line of the falls altogether exceeds an English mile. The quantity of water carried down the falls is prodigious. It will be found to amount to 670,255 tons per minute, though calculated simply from the following data, which ought to be correct, as coming from an experienced commander of one of the king's ships on Lake Erie, well acquainted in every respect with that body of water, viz. that where Lake Erie, towards its eastern extremity, is two miles and a half wide, the water is six feet deep, and the current runs at the rate of two knots in an hour; but Niagara river, between this part of Lake Erie and the falls, receives the waters of several large creeks, the quantity carried down the falls must therefore be greater than the foregoing computation makes it to be; if we say that six hundred and seventy-two thousand tons of water are precipitated down the falls every minute, the quantity will not probably be much over-rated.

" To return now to the Table Rock, situated on the British side of the river, and on the verge of the Horse-shoe Fall. Here the spectator has an unobstructed view of the tremendous rapids above the falls, and of the circumjacent shores, covered with thick woods; of the Horse-shoe Fall, some yards below him; of the Fort Schloper Fall, at a distance to the

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the left; and of the frightful gulf beneath, into which, if he has but courage to approach to the exposed edge of the rock, he may look down perpendicularly. The astonishment excited in the mind of the spectator by the vastness of the different objects which he contemplates from hence is great indeed, and few persons on coming here for the first time can for some minutes collect themselves sufficiently to be able to form any tolerable conception of the stupendous scene before them. It is impossible for the eye to embrace the whole of it at once; it must gradually make itself acquainted, in the first place, with the component parts of the scene, each one of which is in itself an object of wonder, and such a length of time does this operation require, that many of those who have had an opportunity of contemplating the scene at their leisure, for years together, have thought that every time they beheld it each part has appeared more wonderful and more sublime, and that it has only been at the time of their last visit that they have been able to discover all the grandeur of the cataract.

" Having spent a considerable time on the Table Rock, we returned to the fields by the same way by which we had descended, pursuant to the direction of the officer of engineers accompanying us, who was intimately acquainted with every part of the cataract, and of the adjoining ground, and was perhaps the best guide that could be procured in the whole country. It would be possible to pursue your way along the edge of the cliff from the Table Rock a considerable way downwards, but the bushes are so exceedingly thick, and the ground so rugged, that the task would be arduous in the extreme.

" The next spot from which we surveyed the falls, was from the part of the cliff nearly opposite to that end of the Fort Schloper Fall which lies next to the island. You stand here on the edge of the cliff, behind some bushes, the tops of which have been cut down in order to open the view. From hence you have a better prospect of the whole cataract, and are enabled to form a more correct idea of the position of the precipice than from any other place. The prospect from hence is more beautiful, but I think less grand than from any other spot. The officer who so politely directed our movements on this occasion was so struck with the view from this spot, that he once had a wooden house

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house constructed, and drawn down here by oxen, in which he lived CANADA. until he had finished several drawings of the cataract: one of these we were gratified with the sight of, which exhibited a view of the cataract in the depth of winter, when in a most curious and wonderful state. The ice at this season of the year accumulates at the bottom of the cataract in immense mounds, and huge icicles, like the pillars of a massy building, hang-pendant in many places from the top of the precipice, reaching nearly to the bottom.

“ Having left this place, we returned once more through the woods bordering upon the precipice to the open fields, and then directed our course by a circuitous path, about one mile in length, to a part of the cliff where it is possible to descend to the bottom of the cataract. The river for many miles below the precipice is bounded on each side by steep, and in most parts perpendicular cliffs, formed of earth and rocks, and it is impossible to descend to the bottom of them, except at two places, where large masses of earth and rocks have crumbled down, and ladders have been placed from one break to another, for the accommodation of passengers. The first of these places which you come to in walking along the river, from the Horse-shoe Fall downwards, is called the “ Indian Ladder,” the ladders having been constructed there by the Indians. These ladders, as they are called, of which there are several, one below the other, consist simply of long pine trees, with notches cut in their sides, for the passenger to rest his foot on. The trees, even when first placed there, would vibrate as you stepped upon them, owing to their being so long and slender; age has rendered them still less firm, and they now certainly cannot be deemed safe, though many persons are still in the habit of descending by their means. We did not attempt to get to the bottom of the cliff by this route, but proceeded to the other place which is lower down the river, called Mrs. Simco’s Ladder, the ladders having been originally placed there for the accommodation of the lady of the late governor. This route is much more frequented than the other; the ladders, properly so called, are strong and firmly placed, and none of them, owing to the frequent breaks in the cliff, are required to be of such a great length, but what even a lady might pass up or down them without fear of danger. To

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descend over the rugged rocks, however, the whole way down to the bottom of the cliff, is certainly no trifling undertaking, and few ladies, I believe, could be found of sufficient strength of body to encounter the fatigue of such an expedition.

" On arriving at the bottom of the cliff, you find yourself in the midst of huge piles of mis-shapen rocks, with great masses of earth and rocks projecting from the side of the cliff, and overgrown with pines and cedars hanging over your head, apparently ready to crumble down and crush you to atoms. Many of the large trees grow with their heads downwards, being suspended by their roots, which had taken such a firm hold in the ground at the top of the cliff, that when part of it gave way the trees did not fall altogether. The river before you here is somewhat more than a quarter of a mile wide; and on the opposite side of it, a little to the right, the Fort Schloper Fall is seen to great advantage: what you see of the Horse-shoe Fall also appears in a very favourable point of view; the projecting cliff conceals nearly one half of it. The Fort Schloper Fall is skirted at bottom by milk white foam, which ascends in thick volumes from the rocks; but it is not seen to rise above the fall like a cloud of smoke, as is the case at the Horse-shoe Fall; nevertheless, the spray is so considerable, that it descends on the opposite side of the river, at the foot of Simcoe's Ladder, like rain.

" Having reached the margin of the river, we proceeded towards the Great Fall, along the strand, which for a considerable part of the way thither consists of horizontal beds of limestone rock, covered with gravel, except, indeed, where great piles of stone have fallen from the sides of the cliff. These horizontal beds of rock, in some places, extend very far into the river, forming points which break the force of the current, and occasion strong eddies along particular parts of the shore. Here great numbers of the bodies of fish, squirrels, foxes, and various other animals, that, unable to stem the current of the river above the falls, have been carried down them, and consequently killed, are washed up. The shore is likewise found strewed with trees, and large pieces of timber, that have been swept away from the saw-mills above the falls, and carried down the precipice. The timber is generally terribly shattered, and the carcases of all the large animals, particularly of the large fishes, are

are found very much bruised. A dreadful stench arises from the quantity of putrid matter lying on the shore, and the numberless birds of prey, attracted by it, are always seen hovering about the place.

" Amongst the most numerous stories current in the country, relating to this wonderful cataract, there is one that records the hapless fate of a poor Indian, which I select, as the truth of it is unquestionable. The unfortunate hero of this tale, intoxicated, it seems, with spirits, laid himself down to sleep at the bottom of his canoe, which was fastened to the beach at the distance of some miles above the falls. His squaw sat on the shore to watch him. Whilst they were in this situation, a sailor from one of the ships of war on the neighbouring lakes happened to pass by; he was struck with the charms of the squaw, and instantly determined upon enjoying them. The faithful creature, however, unwilling to gratify his desires, hastened to the canoe to arouse her husband; but before she could effect her purpose, the sailor cut the cord by which the canoe was fastened, and set it adrift. It quickly floated away with the stream from the fatal spot, and ere many minutes elapsed, was carried down into the midst of the rapids. Here it was distinctly seen by several persons that were standing on the adjacent shore, whose attention had been caught by the singularity of the appearance of a canoe in such a part of the river. The violent motion of the waves soon awoke the Indian; he started up, looked wildly around, and perceiving his danger, instantly seized his paddle, and made the most surprising exertions to save himself; but finding in a little time that all his efforts would be of no avail in stemming the impetuosity of the current, he with great composure put aside his paddle, wrapt himself up in his blanket, and again laid himself down in the bottom of the canoe. In a few seconds he was hurried down the precipice; but neither he nor his canoe were ever seen more. It is supposed that not more than one-third of the different things that happen to be carried down the falls re-appear at bottom.

" From the foot of Simcoe's Ladder you may walk along the strand for some distance without inconvenience; but as you approach the Horse-shoe Fall, the way becomes more and more rugged. In some places where the cliff has crumbled down, huge mounds of earth, rocks,

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and trees, reaching to the water's edge, oppose your course; it seems impossible to pass them; and, indeed, without a guide, a stranger would never find his way to the opposite side; for to get there it is necessary to mount nearly to their top, and then to crawl on your hands and knees through long dark holes, where passages are left open between the torn up rocks and trees. After passing these mounds, you have to climb from rock to rock close under the cliff, for there is but little space here between the cliff and the river, and these rocks are so slippery, owing to the continual moisture from the spray, which descends very heavily, that without the utmost precaution it is scarcely possible to escape a fall. At the distance of a-quarter of a mile from the Great Fall we were as wet, owing to the spray, as if each of us had been thrown into the river.

"There is nothing whatsoever to prevent you from passing to the very foot of the Great Fall; and you might even proceed behind the prodigious sheet of water that comes pouring down from the top of the precipice, for the water falls from the edge of a projecting rock; and, moreover, caverns of a very considerable size have been hollowed out of the rocks at the bottom of the precipice, owing to the violent ebullition of the water, which extend some way underneath the bed of the upper part of the river. I advanced within about six yards of the edge of the sheet of water, just far enough to peep into the caverns behind it; but here my breath was nearly taken away by the violent whirlwind that always rages at the bottom of the cataract, occasioned by the concussion of such a vast body of water against the rocks. I confess I had no inclination at the time to go farther; nor, indeed, any of us afterwards attempted to explore the dreary confines of these caverns, where death seemed to await him that should be daring enough to enter their threatening jaws. No words can convey an adequate idea of the awful grandeur of the scene at this place. Your senses are appalled by the sight of the immense body of water that comes pouring down so closely to you from the top of the stupendous precipice, and by the thundering sound of the billows dashing against the rocky sides of the caverns below: you tremble with reverential fear, when you consider that a blast of the whirlwind might sweep you from off the slippery rocks on which

you stand, and precipitate you into the dreadful gulf beneath, from CANADA, whence all the power of man could not extricate you: you feel what an insignificant being you are in the creation, and your mind is forcibly impressed with an awful idea of the power of that mighty Being who commanded the waters to flow.

" Since the falls of Niagara were first discovered they have receded very considerably, owing to the disrapture of the rocks which form the precipice. The rocks at bottom are first loosened by the constant action of the water upon them; they are afterwards carried away, and those at top being thus undermined, are soon broken by the weight of the water rushing over them: even within the memory of many of the present inhabitants of the country, the falls have receded several yards. The commodore of the king's vessels on Lake Erie, who had been employed on that lake for upwards of thirty years, informed me, that when he first came into the country it was a common practice for young men to go to the island in the middle of the falls; that after dining there, they used frequently to dare each other to walk into the river towards certain large rocks in the midst of the rapids, not far from the edge of the falls; and sometimes to proceed through the water, even beyond these rocks. No such rocks are to be seen at present; and were a man to advance two yards into the river from the island, he would be inevitably swept away by the torrent. It has been conjectured, as I before mentioned, that the Falls of Niagara were originally situated at Queenstown; and indeed the more pains you take to examine the course of the river from the present falls downward, the more reason is there to imagine that such a conjecture is well founded. From the precipice nearly down to Queenstown, the bed of the river is strewed with large rocks, and the banks are broken and rugged; circumstances which plainly denote that some great disruption has taken place along this part of the river; and we need be at no loss to account for it, as there are evident marks of the action of water upon the sides of the banks, and considerably above their present bases. Now the river has never been known to rise near these marks during the greatest floods; it is plain, therefore, that its bed must have been once much more elevated than it is at present. Below Queenstown, however, there are no traces on the banks to lead

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us to imagine that the level of the water was ever much higher there than it is now. The sudden increase of the depth of the river just below the hills at Queenstown, and its sudden expansion there at the same time, seem to indicate that the waters must for a great length of time have fallen from the top of the hills, and thus have formed that extensive deep basin below the village. In the river, a mile or two above Queenstown, there is a tremendous whirlpool, owing to a deep hole in the bed; this hole was probably also formed by the waters falling for a great length of time on the same spot, in consequence of the rocks which composed the then precipice having remained firmer than those at any other place did. Tradition tells us, that the great fall, instead of having been in the form of a horse-shoe, once projected in the middle. For a century past, however, it has remained nearly in the present form; and as the ebullition of the water at the bottom of the cataract is so much greater at the centre of this fall than in any other part; and as the water consequently acts with more force there in undermining the precipice than at any other part, it is not unlikely that it may remain nearly in the same form for ages to come.

" At the bottom of the Horse-shoe Fall is found a kind of white concrete substance, by the people of the country called spray. Some persons have supposed that it is formed from the earthy particles of the water, which descending, owing to their great specific gravity, quicker than the other particles, adhere to the rocks, and are there formed into a mass. This concrete substance has precisely the appearance of petrified froth; and it is remarkable, that it is found adhering to those rocks against which the greatest quantities of the froth, that floats upon the water, is washed by the eddies.

" We did not think of ascending the cliff till the evening was far advanced, and had it been possible to have found our way up in the dark, I verily believe we should have remained at the bottom of it until midnight. Just as we left the foot of the Great Fall the sun broke through the clouds, and one of the most beautiful and perfect rainbows that ever I beheld was exhibited in the spray that arose from the fall. It is only at evening and morning that the rainbow is seen in perfection;

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for the banks of the river and the steep precipice shade the sun from the CANADA.
spray at the bottom of the fall in the middle of the day.

"The Falls of Niagara are much less difficult of access now than they were some years ago. Charlevoix, who visited them in the year 1720, tells us, that they were only to be viewed from one spot; and that from thence the spectator had only a side prospect of them. Had he been able to have descended to the bottom, he would have had ocular demonstration of the existence of caverns underneath the precipice, which he supposed to be the cause from the hollow sound of the falling of the waters; from the number of carcases washed up there on different parts of the strand; and would also have been convinced of the truth of a circumstance which he totally disbelieved, namely, that fish were oftentimes unable to stem the rapid current above the falls, and were consequently carried down the precipice.

"The most favourable season for visiting the falls is about the middle of September, the time when we saw them, for then the woods are seen in all their glory, beautifully variegated with the rich tints of autumn; and the spectator is not then annoyed with vermin. In the summer season you meet with rattlesnakes at every step, and musquitoes swarm so thickly in the air, that to use a common phrase of the country, "you might cut them with a knife." The cold nights in the beginning of September effectually banish these noxious animals." *

* Weld's Travels, p 371.

NEW BRUNSWICK.

THE ancient province of Nova Scotia was granted by James I. to his secretary Sir William Alexander, afterwards earl of Stirling; and the origin of the title of baronets of Nova Scotia is well known. It was afterwards seized by the French, who seem indeed to have been the first possessors, and by whom it was called Acadie;¹ but it was surrendered to England by the treaty of Utrecht 1713. In 1784, as already stated, it was divided into two provinces, New Brunswick and Nova Scotia. In the former there are two considerable bays, and a river of some length, called St. John's; while that of St. Croix divides New Brunswick from the province of Main, belonging to the United States. The river of St. John is navigable for vessels of fifty tons about sixty miles, and for boats about two hundred; the tide flowing about eighty. The fish are salmon, bass, and sturgeon; and the banks, enriched by the annual freshets, are often fertile, level, and covered with large trees. This river affords a common and near route to Quebec. There are many lakes, among which the Grand Lake is 30 miles long, and about nine broad. The great chain of Apalachian mountains passes on the N. W. of this province, probably expiring at the Gulf of St. Lawrence. The capital is Frederick-town on the river St. John, about ninety miles from its estuary. St. Ann's is almost opposite; and there are some other settlements nearer the bay of Fundi, with a fort called Howe. There is a tribe of savages called the Marechites, estimated at 140 fighting men. The chief products are timber and fish.

¹ See Lahontan, ii. 24.

NOVA SCOTIA.

THIS province is about 300 miles in length, by about 80 of medial breadth, being inferior in size to New Brunswick. There are several considerable rivers, among which that of Annapolis is navigable fifteen miles for ships of 100 tons. The bay of Fundi, between New Brunswick and Nova Scotia, extends fifty leagues inland; the ebb and flowing of the tide being from forty-five to sixty feet. The capital is Halifax, on the bay of Chebucto, well situated for the fishery, with communications, by land and water, with other parts of this province, and New Brunswick.* There is a good harbour, where a small squadron of ships of war, employed in protecting the fishing vessels, is laid up in the winter. The town is entrenched, with forts of timber, and is said to contain fifteen or sixteen thousand inhabitants, a superior population to that of Quebec. Shelburn, towards the S. W. once contained six hundred families: Guisbory about 250. The harbour of Annapolis is excellent; but it is an inconsiderable hamlet. During a great part of the year the air is foggy and unhealthy; and for four or five months intensely cold. There are many forests; and the soil is generally thin and barren, though fertile on the banks of the rivers, in grats, hemp, and flax; but supplies of grain are sent from England. The Micmacs, an Indian tribe of about 300 fighters, dwell to the east of Halifax. Britain sends to these provinces linen and woollen cloths, and other articles to the amount of about 30,000*l.*; and receives timber and fish worth about 50,000*l.* The chief fishery is that of cod on the Cape Sable coast. Near Cape Canco there are remarkable cliffs of white gypsum. About twenty-three leagues from that cape is the Isle de Sable, or of Sand, consisting wholly of that substance, mixed with white transparent stones, the hills being milk-white cones, and some 146 feet above the sea. This strange isle has ponds of fresh water; with junipers, blue-

NOVA
SCOTIA.

Halifax.

* Morse, 120.

berries,

HALIFAX.

berries, and cranberries, and some grafs and vetches, which serve to support a few horses, cows, and hogs.

The late excellent Mr. Pennant has given a capital sketch of arctic geography in general, and as the work has become rare, the following extract may not be unacceptable :

“ The great peninsula of Nova Scotia is separated from Cape Breton by a narrow streight. It was, in 1616, possessed by the French, who attempted to colonize it from their new settlement in Canada ; but they were soon expelled by the English, who deemed it part of North Virginia ; the whole continent, at that time, going under the name of Virginia, so called originally in honour of our virgin queen. The French had given it the name of Acadie. James I. made a grant of the country to Sir William Alexander in 1621, on condition that he would form there a settlement. It then received the title of Nova Scotia. In order to encourage Sir William, he planned the order of baronets, which is called after the country. To every knight who would engage to colonize any part, a grant was to be made of certain portions of land. The order was not instituted till 1625, when a number were created, and they held their lands from the crown of Scotland as a free barony, with great privileges to all who would settle in the country. The design almost instantly failed, and the French were permitted to repossess themselves of the province. Its value became known, and since that period it has frequently changed masters. It never was effectually settled till the year 1749, when a large colony was sent there under the auspices of the Earl of Halifax.

“ The climate of this province is, during the long winter, extremely severe, and the country covered with snow many months : the summer misty and damp. The face of it is in general hilly, but can scarcely be called mountainous, being the lowered continuation of the great chain which pervades the whole continent. The ground is not favourable to agriculture, but may prove excellent for pasturage. Due attention to the breeding of cattle will not only repay the industry of the farmer, by the home consumption, but be an extensive benefit to our islands. The country cannot boast, amidst its vast forests, timber fit for large masts, nor yet for the building of large ships ; yet it will prove an inexhaustible

magazine

magazine for that species of timber called lumber, so essential to our HALIFAX. sugar plantations.

" Its situation in respect to the fisheries, is scarcely inferior to that of Newfoundland. The vast banks called Sable Islands, Brown's, and St. George's, with many others, are frequented by myriads of cod fish. It is the duty of the parent state to encourage, with all diligence, this branch of commerce, and in a manner so expeditious and so frugal, as may anticipate and undersell foreign adventurers. Without that, our remnants of the New World will be but of little use. The fisheries, the staples of Nova Scotia and Newfoundland, are open to other nations; and if they are permitted to excel us in the articles expedition and frugality, our labours are truly vain. It is to the ancient hardy colonists we must look up for the support of the toils of the sea, and the advantages we may expect to gain from them: they should have their encouragement.

" The harbours of this province are frequent and excellent. The tides are in many places most uncommonly high. Those of the bay of Fundy are the most remarkable, for they force themselves into the great creeks with a bore or head from fifty to seventy-two feet high, and with most amazing rapidity. Hogs, which feed along the shores, are much more sensible of its approach than mankind: they are observed to listen, to prick up their ears for some time, and then suddenly to run off at full speed.

" The coasts are, in general, rude and rocky, with some variations, but in many places exhibit most picturesque scenery. All the northern side is high, red, and rocky. The isles of Canoe are varied with many low white rocks. From them to Torbay is a series of lofty coast, broken and white. Beaver harbour is guarded by most picturesque rounded isles. South shore of Chebucto steep: the plaister cliffs in George Bay are remarkable for their precipitous face and whiteness. Sable, or Sand Island, is distinguished (as the name imports) by amazing sand hills of a sugar-loaf form. The isle of Great Manan, on the western side of the entrance of the bay of Fundy, is very lofty, the strata divided, and the top wooded. St. Mary's Bay is nobly bounded by high rocks, clothed on their summits with woods: the entrance into it

HALIFAX. are the Grand and Petit Passage; the sides of the last are either covered with hanging woods, sloping to the water edge, or broke into short precipices. The entrance into the fine harbour of Annapolis is most august: a narrow gut, bounded by enormous precipices, with lofty hills soaring above, the tops of which are even, and cloathed with woods. The approach to the basin of Minas is not less magnificent. The columnar rocks of Cape Split are very singular. The isle of Haute is lofty and steep on every side. The whole neighbourhood abounds with views of the most sublime and romantic cast." *

* Pennant's Arctic Zoology, p. cxcviii. 1st edition.

ISLAND

ISLAND OF CAPE BRETON.

THIS island is attached to the province of Lower Canada, though divided from Nova Scotia only by a strait of one mile in breadth. It is about a hundred miles in length; and according to the French authors was discovered at a very early period, about A. D. 1500, by the Normans and Bretons, who navigated these seas; and being supposed a part of the continent, was called Cape Breton, a name absurdly retained. They did not however take possession of it till 1713, when they erected Fort Dauphin: the harbour being found difficult, Louisburg was built in 1720, the settlers being chiefly from Europe, as the Acadians, or French of Nova Scotia, did not choose to leave that country. In 1745 Cape Breton was taken by some troops from New England, and has since remained subject to the British crown. The climate is cold and foggy, not only from the proximity of Newfoundland, but from numerous lakes and forests. The soil is chiefly mere moss, and has been found unfit for agriculture. The chief towns are Sidney and Louisburg; the whole inhabitants of the isle do not exceed one thousand. The fur trade is inconsiderable, but the fishery very important, this island being esteemed the chief seat; and the value of this trade, while in the French possession, was computed at a million sterling. There is a very extensive bed of coal in this island, in a horizontal direction, not more than six or eight feet below the surface; but it has been chiefly used as ballast: in one of the pits a fire was kindled by accident, and remains unextinguished.

CAPE
BRETON.

The island of St. John is at no great distance to the west of Cape Breton, being about sixty miles in length by thirty in breadth, and is attached to the province of Nova Scotia. The French inhabitants, about four thousand, surrendered, with Cape Breton, in 1745. It is said to be fertile, with several streams. A lieutenant-governor resides at Charlotte town; and the inhabitants of the island are computed at five thousand.

St. John.

NEWFOUNDLAND.

NEWFOUND-
LAND.

THIS island was discovered by John Cabot in 1497, who also founded the prior claim of England to the North American shores as far south as Florida. This discovery, like that of Columbus and others, was unintentional, the design being merely to penetrate to the East Indies. Those authors who wonder that no colonies were sent, only shew their ignorance of the intentions of the first navigators; and at that period there was not one man in Europe who could have formed the smallest idea of the benefits of a colony. It was the success of the Spanish colonies, allured by gold alone, that, towards the end of the sixteenth century, enlarged the ideas of mankind: but even then Raleigh's transcendent mind held out gold to all his followers, as the sole inducement. The island of Newfoundland is about 320 miles in length and breadth, the shape approaching to a triangle. It seems to be rather hilly than mountainous, with woods of birch, small pine, and fir, yet on the south-west side there are lofty head-lands. The country has scarcely been penetrated above thirty miles; but there are numerous ponds and morasses, with some dry barrens. The great fishery on the banks of Newfoundland begins about the 10th of May, and continues till the end of September. The cod is either dried for the Mediterranean, or what are called mud-fish, barrelled up in a pickle of salt, for the English market. These banks and the island are environed with constant fog, or snow and fleet; the former supposed by some to be occasioned by the superior warmth of the gulf stream from the West Indies. The fishery is computed to yield about 300,000l. a year, from the cod sold in the Catholic countries. The island of Newfoundland, after many disputes with the French, was ceded to England 1713, the French having permission to dry their nets on the northern shores; and in 1763 it was stipulated that they might fish in the gulf of St. Lawrence; and the small isles of St. Pierre and Miquelon were ceded to them. The French, by the

Fishery.

†1

treaty

treaty 1783, were to enjoy their fisheries on the northern and western NEWFOUND- coasts, the inhabitants of the United States having the same privileges LAND. as before their independence; and the preliminaries of October 1801 confirm the privileges granted to the French.

The chief towns are St. John in the S. E. with Placentia in the south, and Bonavista in the east; but not above a thousand families remain during the winter. In the spring a small squadron is sent to protect the fisheries and settlements, the admiral being also governor of the island, its sole consequence depending on the fishery; and there are two lieutenant-governors, one at St. John's, another at Placentia.*

Mr. Pennant, in his valuable work, intitled *Arctic Zoology*, gives the following account of the fisheries of Newfoundland:—

“The short sighted avaricious prince, under whose banners it was discovered, had not the heart to make the proper advantage. He had before neglected the offer of Columbus, which would have given him that species of right to the whole New World. ‘But,’ says the courtier-like Bacon, ‘it was not a refusal on the king’s part, but a delay by accident, which put by so great an acquiescence.’ The French soon found out the gold mine of the Newfoundland discovery, which offered itself in the fisheries. Of all minerals (twice says the same noble philosopher) there is none like the fisheries. In 1534 they were actually engaged in them. A private man, Sir Humphry Gilbert, brother-in-law to Raleigh, or, what was better, animated by a congenial soul, sailed in 1583 with every provision for settling this important colony. On his return he was swallowed up by the ocean. His love of improvement, and his piety, never forsook him. He was seen sitting unmoved in the stern of his ship, with a book in his hand, and often heard to say, ‘Courage, my lads! we are as near heaven at sea as at land.’

“The isle of Newfoundland is of a triangular form, and lies between lat. 46. 40, and 51. 30; visited occasionally, but not inhabited by savages from the continent.

“The boasted mine of this island lies on the southern and western sides, on the great bank, which stretches from north-east to south-west,

* The isle of Anticosti, at the mouth of the St. Lawrence, is full of rocks, and has no harbour, but is covered with wood; and excellent cod is found on the shores.

NEWFOUND-
LAND.

about two hundred leagues. The water on the bank is from twenty-two to fifty fathoms; on the outside from sixty to eighty; on the lesser banks much the same. A great swell and thick fog generally mark the place of the greater. The subject of the fishery has been often treated of; but the following short though clear account of so interesting a subject cannot fail being acceptable to the British reader.

"The boats or shallops are forty feet in the keel, rigged with a main-mast and fore-mast, and lug-sails; furnished with four oars, three of which row on one side, and the other (which is twice as large) belays the other three, by being rowed sideways over the stern, by a man who stands up for that purpose, with his face towards the rowers, counter-acting them, and steering at the same time as he gives way to the boat.

"Each of the men in this boat is furnished with two lines, one at each side of the boat, each furnished with two hooks; so here are sixteen hooks constantly employed, which are thought to make a tolerable good day's work of it if they bring in from five to ten quintals of fish, though they have stowage for, and sometimes bring in thirty. Two hundred quintals is called a saving voyage, but not under. The bait is small fish of all kinds; herring, capelin, lance, tom cod or young cod; the first of which they salt, and keep for some time, in case of scarcity of the rest; but these are not near so eagerly taken by the fish when salted. In case small fish cannot be got, they use sea-fowl, which are easily taken in vast numbers, by laying nets over the holes in the rocks where they come to roost in the night. If neither small fish nor birds are to be got, they are forced to use the maws of fish they catch, which is the worst bait of any.

"When the fish are taken, they are carried to the stage, which is built with one end over the water, for the conveniency of throwing the offals into the sea, and for their boats being able to come close to discharge their fish. As soon as they come on the stage, a boy hands them to the header, who stands at the side of a table next the water, and whose business it is to gut the fish and cut off the head, which he does by pressing the back of the head against the side of the table, which is made sharp for that purpose, when both head and guts fall through a hole in the floor into the water. He then shoves the fish to the splitter, who

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who stands opposite to him; his business is to split the fish, beginning at the head, and opening it down to the tail; at the next cut he takes out the larger part of the back bone, which falls through the floor into the water. He then shoves the fish off the table, which drops into a kind of hand-barrow, which, as soon as filled, is carried off to the salt pile. The header also flings the liver into a separate basket, for the making of train-oil, used by the curriers, which bears a higher price than whale-oil.

NEWFOUND-
LAND.

" In the salt pile, the fish are spread upon one another, with a layer of salt between. Thus they remain till they have taken salt, and then are carried, and the salt is washed from them by throwing them off from shore in a kind of float called a pound. As soon as this is completed, they are carried to the last operation, of drying them, which is done on standing flakes made by a slight wattle, just strong enough to support the men who lay on the fish, supported by poles, in some places as high as twenty feet from the ground: here they are exposed, with the open side to the sun; and every night, when it is bad weather, piled up five or six on a heap, with a large one, his back or skinny part uppermost, to be a shelter to the rest from rain, which hardly damages him through his skin, as he rests slanting each way to shoot it off. When they are tolerably dry, which in good weather is in a week's time, they are put in round piles of eight or ten quintals each, covering them on the top with bark. In these piles they remain three or four days to sweat; after which they are again spread, and when dry put into larger heaps, covered with canvas, and left till they are put on board.

" Thus prepared they are sent to the Mediterranean, where they fetch a good price, but are not esteemed in England; for which place another kind of fish is prepared, called by them mud-fish, which, instead of being split quite open, like their dry fish, are only opened down to the navel. They are salted and lie in salt, which is washed out of them in the same manner with the others; but instead of being laid out to dry, are barrelled up in a pickle of salt boiled in water.

" The train-oil is made from the livers: it is called so to distinguish it from whale or seal oil, which they call fat oil, and is sold at a lower price (being only used for lighting of lamps) than the train-oil, which is used.

NEWFOUND-
LAND.

used by the curriers. It is thus made:—They take a half tub, and, boring a hole through the bottom, press hard down into it a layer of spruce boughs, upon which they place the livers, and expose the whole apparatus to as sunny a place as possible. As the livers corrupt the oil runs from them, and, straining itself clear through the spruce boughs, is caught in a vessel set under the hole in the tub's bottom."*

These dreary shores are strongly contrasted by the Bermudas or Sommer Islands, lying almost at an equal distance between Nova Scotia and the West Indies; but as they are nearer to the coast of Carolina than to any other land, it seems more proper to arrange them here than under any other division.

* Pennant's Arctic Zoology, p. cxcv. 1st Edition.

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THE BERMUDAS, OR SOMMER ISLANDS.

THEY are four in number, and were discovered by the Spaniards BERMUDAS. under John Bermudas, in 1527; but being afterwards neglected by them, they were again discovered by the shipwreck of Sir George Som-mer in 1609; which event seems to have induced Shakespear to describe them as ever *vexed* with storms. Another poet, Waller, who resided there some time, on his being condemned for a plot against the parliament in 1643, describes them in very different colours, as enjoying a perpetual spring. In 1725 the benevolent and eccentric bishop Berkley proposed to erect a college in these islands for the conversion of the savage Americans! Of these little islands the chief is that called St. George, with a capital town of the same name, containing about five hundred houses, built of a soft free-stone, probably like that of Bath; the inhabitants being about three thousand, and those of all the isles together about nine thousand. There is a governor, council, and general assembly; the religion being that of the church of England. The people are chiefly occupied in building light ships of their cedars, in which they trade to North America and the West Indies. It would appear that these remote isles were uninhabited when settled by the English, but a good history and description of the Bermudas might afford a pleasing addition to the geographical library. Mr. Morse says that the blacks are here twice as numerous as the whites; and that a great part of their trade consists in carrying salt to America. The women are said to be handsome, and both sexes fond of dress, which is perhaps more laudable than the opposite extreme.*

* From the chart by Lempriere, 1797, it appears that the largest island called Bermuda resembles a hook, the great sound fronting the north. The length is about 35 g. miles, the breadth seldom two. The other isles are St. George's, St. David's, and Sommerfet, with several islets, and numerous rocks. They are also frequented by whale-fishers.

NATIVE TRIBES, AND UNCONQUERED COUNTRIES.

THE arrangement of this division shall chiefly pursue the order of the discoveries from the east towards the west. On this plan Greenland shall be followed by Labrador, and the territory belonging to the Hudson's Bay Company. Some account may be then given of the central parts and tribes, which shall be followed by the discoveries of the western coast and islands by the Russians, Cook, Vancouver, La Perouse, and other navigators, and by the late enterprising traveller Mackenzie.

GREENLAND.

The discovery of this extensive region, which, whether continental or insular, must ever continue to be regarded as belonging to North America, has been already mentioned as having been effected by the people of Iceland in the tenth century; the distance, according to the best maps, being about eight degrees of longitude in lat. 66°, or nearly 200 g. miles; but some maps reduce it to five degrees, or not more than 130 g. miles.* The intercourse between this colony and Denmark was

main-

* The industrious Torfaeus, in his *Groenlandia Antiqua*, has collected every memorial that could be found concerning ancient Greenland, and has illustrated the Danish settlements with a map, in which the nearest coast is supposed to be at least 200 g. miles from Iceland, and distinguished by the lofty mountains called Hvítferk and Bláferk. It was reported in the old accounts that the mountain Snœfell in Iceland, and Hvítferk in Greenland, could be seen from the middle of this

maintained till the beginning of the fifteenth century, the last of seven-^{GREENLAND}teen bishops being named in 1406: and in that century, by the gradual increase of the arctic ice, the colony appears to have been completely imprisoned by the frozen ocean; while on the west a range of impassable mountains and plains, covered with perpetual ice, precluded all access. The ancient settlement contained several churches and monasteries, the names and positions of which may be traced in the map by Torfaeus; from which it would seem that the colony extended over about 200 miles in the S. E. extremity. On the west some ruins of churches have also been discovered. In more recent times the western coast was chiefly explored by Davis, and other English navigators; but there was no attempt to settle any colony. A pious Norwegian clergyman, named Egede, having probably read the book of Torfaeus published in 1715, was deeply impressed with the melancholy situation of this colony, if it should be found to exist; and in 1721 proceeded to the western shore, where he continued till 1735, preaching the gospel to the natives, his benevolent example having been since followed by several missionaries. The sect called Moravians began their settlements about thirty years after, being chiefly those of New Hernhuth and Lichtenfels. It is said that the country is inhabited as far as 76°; but the Danish and Moravian settlements are chiefly in the S. W. though at one time there appear to have been a factory as far north as 73°. The natives have no conception of what we call Baffin's Bay; but say, that in the north of their country there is a narrow strait which divides it from the continent of America.*

This dreary country may be said to consist of rocks, ice, and snow; but in the southern parts there are some small junipers, willows, and birch. There are rein-deer, and some dogs resembling wolves, with arctic foxes, and polar bears. Hares are common; and the walrus, and five kinds of seals, frequent the shores. The birds, particularly sea

channel; but this is a doubtful tradition. See the valuable voyages by order of the French king in 1771 and 1772, for the illustration of various provinces in navigation and geography; Paris, 1778, 4to. i. 264. ii. 244. Some mountains of Greenland may however be seen at the distance of forty or sixty leagues. Crantz, vol. i. p. 8.

* Mr. Pennant, Arctic Zoology, cccxii. ed. 2d, observes, that the Yarmouth whale fishers, who proceed as far as Disko Bay, give no intelligence concerning Baffin's Bay.

GREENLAND. and water fowl, are tolerably numerous; as are the fish; and the insects exceed ninety.

A celebrated naturalist gives the following account of the animals of this country:—

“ The quadrupeds of this country are the rein-deer, which are here merely considered as objects of the chase. Their number is lessened greatly, and they are now only found in the most remote parts. The ukalcradjek is, I suspect, an animal of imagination: it is said by the Greenlanders to be long-eared, hare-lipped, and to resemble that animal; to have a short tail, to be of a white colour, with a dark list down the back, and of the size of a rein-deer. The dogs resemble wolves in figure, size, and nature. Left to themselves, they hunt in packs the few animals of the country, for the sake of prey. They exactly resemble the dogs of the Eskimaux of Labrador. It is probable that they might have been originally brought here by their masters, who first fled that country, and populated Greenland. Arctic foxes abound here; and, with polar bears, infest the country. Had I not such excellent authority, I should have doubted whether the wolverene, usually an inhabitant of wooded countries, was found in Greenland; but it is certainly met with, yet rarely, in the southern parts, where it preys on the rein-deer and white hares. It must have been originally waisted hither on the ice from Terra de Labrador, the nearest place to this of which it is an inhabitant. The varying hare is very common. The walrus, and five species of seals, inhabit these seas: the common, the great, the rough, the hooded, the harp, and an obscure species, called by the Laplanders *fatur vindac*, with a round head and long snout, bending like the proboscis of an elephant. Mr. Fabricius adds to the marine animals the white-tailed manati, of which he once saw the head partly consumed.

“ The polar bears, seals, and manati, were originally natives of these countries. The other quadrupeds found their way here from either Hudson's Bay or Labrador, on the islands of ice. The Arctic fox found the same kind of conveyance from Greenland to Iceland as it did with the rein-deer to Spitzbergen. To the last was waisted, probably from Labrador, the common weefel, the red or common fox; and the mouse,

mentioned p. xlix, missed Greenland, but arrived at and stocked Iceland; GREENLAND
and the common bat was originally tempest-driven to the latter from
Norway: the wolverene and varying hare never reached farther than
Greenland.—This seems the progress of quadrupeds in the frigid zone,
as high as land is found." *

What is called the *ice blink* is an amazing congeries of ice, at the
mouth of an inlet, the splendor of which is discerned at the distance of
many leagues. It is said to extend in magnificent arches for about
twenty-four miles. The short summer is very warm, but foggy; and
the northern lights diversify the gloom of winter. What is called the
frost smoke bursts from cracks in the frozen ocean. The natives are
short, with long black hair, small eyes, and flat faces, being a branch
of the Eskimos, or American Samois: it is supposed that they do not
now exceed ten thousand, the number having been greatly reduced by
the small pox. Their canoes, in which one man proceeds to kill seals,
are of a singular construction, and have sometimes been wafted as far
as the Orkneys. The highest mountains are on the west side; and the
three pinacles of what is called the Stag's Horn are visible from sea at
the distance of forty or sixty leagues. Crantz observes that the rocks
are very full of clefts, commonly perpendicular, and seldom wider than
half a yard, filled with spar, quartz, talc, and garnets. The rocks are
generally rather vertical or little inclined, consisting of granite, with
some sand stone and lapis olaris. Our author's imperfect mineralogy
also indicates micaceous schistus, coarse marble, and serpentine; with
asbestos and amianthus, crystals, and black schorl. It is said that flu-
ate of argill, a new substance, has been recently found in Greenland; per-
haps this is the soft transparent stone of Crantz. The lapis olaris is of
singular utility in Greenland, and the north of America, being used for
lamps and culinary utensils. The soil consists of unfertile clay or sand.
The winter is very severe; and the rocks often burst by the intensity of
the frost. Above 66° the sun does not set in the longest days, and at
64° is not four hours beneath the horizon.

* Pennant's Arctic Zoology, p. clxxii. first edition.

LABRADOR.

LABRADOR.

LABRADOR.

This large extent of coast was so named by the Portuguese navigator who made the first discovery. In the inland parts there were American savages, and on the coasts Eskimos; but the former have mostly retired to the south, and even the latter seem gradually to withdraw: neither people had the ingenuity of the Laplanders. There were here only a few factories, till the Moravian clergy formed little settlements, particularly at Nain, about 1764. To these missionaries we are indebted for the discovery of that elegant iridescent felspar, called the Labrador stone. It is said to have been first discovered in sailing through some lakes,* where its bright hues were reflected from the water. The most rare colour is the scarlet.

Mr. Cartwright, who resided at intervals nearly sixteen years in this desolate country, has published a minute and prolix journal, which however gives a curious picture of its state, and appearances along the coast, for the inland parts have never been explored.¹ His Indians seem to be Eskimos, and their manners are very filthy. He remarks that the grouse not only change their colour in the winter, but that they then gain a large addition of white feathers. The porcupines resemble the beaver in size and shape; and he observed wolvereens.² He who wishes to study the manners of bears may here find ample satisfaction. At a cataract, surrounded with elders, spruces, firs, larches, birch, and aspen, many salmon ascend, and the bears assemble in numbers to catch their favourite prey. Some dive after the fish, and do not appear till at the distance of seventy or eighty yards. Others seem to be loungers, who only come to see what is going forwards, and to enjoy the promenade and the spectacle. Our author counted thirty-two white bears, and three black ones.³ Rein-deer also abound, and their venison

* A large inland sea, or lake, is laid down by D'Anville, which has recently been copied under the appellation of a New Sea.

¹ Newark, 1792, 3 vols. 4to.

² Ib. i. 278. ii. 58.

³ Ib. 346.

is excellent. Mr. Cartwright contradicts the received accounts of the beaver, asserting that he never eats fish nor any animal food; but lives on the leaves and bark of such trees and shrubs as have not a resinous juice, and the roots of the water lily.* Their sagacity is not so great as is generally supposed; but there is something so singular in their erect movements, that an illiterate observer pronounced them to be "enchanted Christians."

Even the peaceable Eskimos are liable to savage contests; and, about 1736, in a quarrel concerning a young woman, a furious slaughter arose, in which neither sex nor age were spared. At the close of his third volume Mr. Cartwright gives a general idea of the country, and a thermometrical journal. So far as discovered, Labrador is generally hilly, and even mountainous; but the southern parts might be improved, though it would be difficult to guard against the white bears and wolves; and cattle must be housed for nine months in the year.

The eastern coast exhibits a most barren and iron-bound appearance, the rocky mountains rising suddenly from the sea, with spots of black peat earth, producing stunted plants. Rivers, brooks, lakes, pools, and ponds, are abundant, rich in fish, and frequented by innumerable birds. Though springs be rare, the waters being mostly dissolved snow, yet swelled throats are unknown, though frequent in the alpine countries of Europe and Asia. The eastern coast also presents thousands of islands, covered with flocks of sea fowl, particularly eider ducks; and in the larger isles there are deer, foxes, and hares. The fish are salmon, trout, pike, barbel, eels, and others.

Inland the air is milder; there are many trees, and some symptoms of fertility. The plants are wild celery, scurvy grass, reddocks, and Indian sallad. There are some appearances of iron; and the Eskimos now collect the Labrador spar on the shores of the sea and lakes, for the rocks have not been discovered. Perhaps this spar was the shining stone brought from Labrador by one of our early navigators, as a specimen of gold ore. The birds are common to arctic regions, and the animals are mostly of the fur kind, in which trade our author was engaged.

* Carter, iii. 24.

LABRADOR.

The natives are mountaineers and Eskimos; the former resembling gipsies, with somewhat of French features, from a mixture of Canadian blood. They chiefly live on rein deer, and also kill foxes, martins, and beavers. They live in wigwams, a kind of tents covered with deer skin and birch rind; and are a sort of Roman Catholics, being anxious to visit the priests at Quebec. The Eskimos are the same people with the Greenlanders, whose manners are minutely described by Grantz. They use sledges drawn by dogs, as in Asia. Remains of seals and oily substances have a remarkable effect on the ground, so as to produce rich crops of grass on spots formerly only sprinkled with heath.

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HUDSON'S BAY.

THE inland sea commonly called Hudson's Bay was explored in 1610; and a charter for planting and improving the country, and carrying on trade, was granted to a company in 1670. The Hudson's Bay Company has since retained a claim to most extensive territories, on the west, south, and east, of that inland sea, supposed to extend from 70° to 115°, and allowing the degree only thirty miles, the length will be 1350 g. miles, and the medial breadth about 350. This vast extent of ice and snow is however of little consequence considered in itself; and it is not understood that the company gain great wealth. An able writer has also defended them against the invidious charge of obstructing geographical knowledge for the sake of commercial monopoly.* The journey of Mr. Hearne is indeed a manifest though tardy proof of the contrary. The annual exports are about 16,000l.; and the returns, which yield a considerable revenue to government, perhaps amount to 30,000l. The North-west Company, lately established at Montreal, has also considerably reduced the profits; but an enquiry into the state of this company, and of their territories, might be an object of some importance, and might perhaps lead to great improvements in the mode of conducting the commerce, and deriving every possible advantage from these extensive territories and seas. The establishment of factories, here called forts, and which sometimes contain small garrisons, and other peculiar circumstances, seem more adapted to the powers of a commercial company, than of private traders; and even the example and success of the North-west Company seem to authorize that of Hudson's Bay. But they ought strictly to attend to the character of their servants, who, as Mr. Cartwright observes, will sometimes kill an Indian in preference to a deer.

The regions around Hudson's Bay, and that of Labrador, have, by a miserable compliment to the parent country, been sometimes called New

* Introduction to Cook's last Voyage.

HUDSON'S
BAY.

Britain, a name not admitted in French or English maps. The parts on the west of Hudson's Bay have also been called New North and South Wales; while that on the east is styled East Main. In the south, James's Bay stretches inland about 300 miles by about 150 in breadth; and the most valuable settlements are in that vicinity, as Albany fort, Moose fort, and East Main factory. Further to the south, and on the confines of Upper Canada, are Brunswick house, Frederick house; and some others, which, perhaps, belong to the North-west Company. In the north, Severn house is at the mouth of a large river, which seems to flow from the lake of Winnipic. York fort stands on Nelson's river; and still further to the North is Churchill fort, which seems the furthest settlement in that direction.* To the west the Hudson's Bay Company had extended little further than Hudson's house; while the superior spirit of the North-west Company has nearly approached the Pacific.† The most important rivers are the Nelson or Saskashawin, and the Severn; the comparative course of the latter scarcely exceeding 400 B. miles, but of great breadth and depth. In the south the Albany, Moose, Abitib, and Harricana, are the most considerable; but all the rivers are impeded with falls and shoals. Near that singular inlet called Chesterfield there are many lakes, but the barbarous names would neither edify nor entertain the reader; nor is it likely that they should ever become memorable in natural or civil history. The sea of Hudson commonly presents bold rocky shores; but at intervals there are marshes and large beaches. There are several high islands, the largest of which in the north has been little explored; and in what is called Baffin's Bay (if such a sea exist), some maps and charts admit a very large central island called James Island, which others entirely reject.

Even in lat. 57° the winters are extremely severe; the ice on the rivers is eight feet thick, and brandy coagulates. The rocks burst with a horrible noise, equal to that of heavy artillery, and the splinters are thrown to an amazing distance.‡ Mock suns, and haloes, are not unfre-

* Churchill fort was built in 1715. It is also called Fort Prince of Wales.

† The boundary between the Hudson's Bay Company and Canada is understood to follow the ridge that gives source to the rivers flowing N. and S. as far as Lake Annipeg; whence lat. 49° is said to form the limit.

‡ Pennant, A. Z. ccxcvi. ed. 2d.

quent;

quent; and the sun rises and sets with a large cone of yellowish light. The aurora borealis diffuses a variegated splendour, which equals that of the full moon; and the stars sparkle with fiery redness. The fish in Hudson's Bay are far from numerous; and the whale fishery has been attempted without success. There are few shell fish; and the quadrupeds and birds correspond with those of Labrador and Canada. The northern indigenes are Eskimos; but there are other savages in the south; and the factories are visited by several tribes.*

In his Arctic Zoology Mr. Pennant has given an excellent treatise on the geography of the northern parts of the world; and as that valuable work has become scarce, an extract concerning Hudson's Bay may not be unacceptable.

"We now proceed through a nameless strait, between the main land and the two great islands on the east; and, after doubling Cape Southampton, enter into Hudson's Bay, in the gulph called the Welcome. This bay was discovered in 1610, by that able seaman Henry Hudson, from whom it takes its name. His view, in the voyage he made, was the discovery of a passage to the East Indies. The trial has been vigorously pursued since his days, but without success. In 1742 an attempt was made, as low as the bottom of the Welcome, by Captain Middleton; and from the check he met with, he called that part Repulse Bay. In subsequent trials, Wager's Water was suspected to be the passage into the western ocean; but, in 1747, its end was discovered, and found to terminate in two navigable rivers. The romantic scenery which the adventurers met with in the way is most admirably described by the elegant pen of Mr. Henry Ellis.

"Chesterfield, or Bowden's Inlet, was likewise suspected to have been the desired strait; but, in 1762, Messrs. Norton and Christopher, in a sloop and cutter belonging to the Company, went to the remotest end.

* The tenth chapter of Mr. Hearne's journey may be consulted for an account of the animals and vegetables. A dwarf larch is here called the juniper. The *wiltha capucca* is called American tea, being drank in infusion. Mr. Hearne observes, p. 51, that the American savages always enjoy, and even laugh at, the sight of distress or pain. Ulloa marks it as characteristic of those in S. America, that they inflict the greatest cruelties with perfect indifference. On any dangerous illness, p. 203, the patient is left to perish alone. It is a favourite pastime of the women to kill a captive woman or child, p. 266.

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BAY.

At the distance of a hundred and twenty-eight miles from the mouth was scarcely any tide; thirty miles further it quite died away. The land here grew contracted into a very narrow passage. Here the adventurers entered with the cutter, and discovered that the end was in a magnificent fresh water lake, to which was given the name of Baker's. The land was quite level, rich in grass, and abounding with deer. They found the end quite innavigable, and to terminate in a small stream, with many shoals at its mouth, and three falls across it. After finding the water decrease to the depth of two feet, they returned fully satisfied with their voyage.

"Hudson's Bay has been so frequently described, that I shall only give a general view of it and its adjacent parts. Its entrance from the ocean, after leaving to the north Cape Farewell and Davis's Streights, is between Resolution Isles on the north, and Button's Isles, on the Labrador coast, to the south, forming the eastern extremity of the streights distinguished by the name of its great discoverer. The coasts very high, rocky, and rugged at top; in places precipitous; but sometimes exhibit large beaches. The isles of Salisbury, Nottingham, and Digges, are also very lofty and naked. The depth of water in the middle of the bay is a hundred and forty fathoms. From Cape Churchill to the south end of the bay are regular soundings; near the shore shallow, with muddy or sandy bottom. To the north of Churchill, the soundings are irregular, the bottom rocky, and in some parts the rocks appear above the surface at low water. From Moose river, or the bottom of the bay, to Cape Churchill, the land is flat, marshy, and wooded with pines, birch, larch, and willows. From Cape Churchill to Wager's Water the coasts are all high and rocky to the very sea, and woodless, except the mouths of Pockerekesko and Seal rivers. The hills on their back are naked, nor are there any trees for a great distance inland.

"The mouths of all the rivers are filled with shoals, except that of Churchill, in which the largest ships may lie; but ten miles higher, the channel is obstructed with sand-banks; and all the rivers, as far as has been navigated, are full of rapids and cataracts, from ten to sixty feet perpendicular. Down these rivers the Indian traders find a quick passage; but their return is a labour of many months.

" As far inland as the Company have settlements, which is fix ^{HUDSON'S BAY.} hundred miles to the west, at a place called Hudson House, lat. 53. long. 106° 27'. from London, is flat country: nor is it known how far to the eastward the great chain, seen by our navigators from the Pacific Ocean, branches off.

" The climate even about Hay's river, in only lat. 57°, is, during winter, excessively cold. The snows begin to fall in October, and continue falling by intervals the whole winter; and, when the frost is most vigorous, in form of the finest sand. The ice on the rivers is eight feet thick. Port wine freezes into a solid mass; brandy coagulates. The very breath fell on the blankets of the beds in form of a hoar frost, and the bed-cloaths often were found frozen to the wall. The sun rises, in the shortest day, at five minutes past nine, and sets five minutes before three. In the longest day the sun rises at three, and sets about nine. The ice begins to disappear in May, and hot weather commences about the middle of June; which, at times, is so violent as to scorch the face of the hunters. Thunder is not frequent, but very violent. But there must be great difference of heat and cold in this vast extent, which reaches from lat. 50° 40'. to lat. 63°. north.

" During winter the firmament is not without its beauties. Mock suns and halôs are not unfrequent; are very bright, and richly tinged with all the colours of the rainbow. The sun rises and sets with a large cone of yellowish light. The night is enlivened with the Aurora Borealis, which spreads a thousand different lights and colours over the whole concave of the sky, not to be defaced even by the splendour of the full moon; and the stars are of a fiery redness.

" Hudson's Bay is very ill supplied with fish. The common whale is frequent there. The company have attempted to establish a fishery; and for that purpose procured experienced people from the Spitzbergen ships, and made considerable trials between lat. 61° and lat. 69°; but, after expending twenty thousand pounds, and taking only three fish, were, in 1771, obliged to desist. The ice prevented the vessels from getting to a proper station in due time; and the hard gales, and quick return of winter, always deprived them of an opportunity of making a fair trial. The fishery of the Beluga, or White Whale, is attended with more success.

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BAY.

It haunts the mouths of rivers in June, as soon as they have discharged the ice, and are taken in great numbers. There are two varieties; one with a blue cast, the other of a pure white. These animals, probably, superfete; a fœtus of six inches in length having been extracted, at the same time that a young one has been seen (as is their custom) mounted on the back of the mother.

"Sturgeons of a small size are found in the rivers, not far from the sea. They appear to me to be of the same species with the English. Sturgeons are found in great plenty in the lakes far inland, and from the weight of six to forty pounds. I suspect these to be the same with the sturgeons of the great lakes of Canada, which, I am told, are smooth, or free from tubercles; and probably the *acipenser huso* of Linnæus, and Hansen of the Germans, a fish of the Danube and Wolga.

"The *lophius piscatorius*, or common angler, Br. Zool. iii. No. 51, appears towards the surface only in windy weather; for which reason it is called by the natives thutina-meg, or the wind-fish.

"The *gadus lota*, or burbot, Br. Zool. ii. No. 86, is common in the rivers, and is caught with hooks after nine o'clock at night. It is called here Martley; grows to the weight of eight pounds; is so voracious as to feed even on the tyrant pike; will devour dead deer, or any carrion, and even swallow stones to fill its stomach: one of a pound weight has been taken out of a fish of this species. It spawns about February 8th, and is unhappily most prolific. Mr. Hutchins counted, in a single fish, 671,248 ovaria.

"Allied to this is the mathemeg of the natives, the land cod of the English, a fish abundant in the northernly lakes; it grows to the length of three feet, and the weight of twelve pounds: has three beards on the lower jaw; the middlemost the longest: the back is brownish; the belly grey.

"The *perca fluviatilis*, or common perch, Br. Zool. iii. No. 124, is found in the rivers, but not in plenty; and sometimes grows to the weight of eight pounds. The *gasterosteus aculeatus*, or three-spined stickleback, Br. Zool. iii. No. 129, is found here in great numbers.

"*Salmo salar*, or the common salmon, Br. Zol. iii. No. 143, is taken in plenty from June to August, in nets placed along the sea-shores,

shores, and salted for use. Very few are caught to the south of HUDSON'S BAY. Churchill river.

"The namaycush, is a species of trout, with the head, back, dorsal fin, and tail of a dark blue: the sides dusky, marked with white and reddish spots: the belly silvery: the flesh white, and very delicate. It is caught with the hook in lakes far inland; and sometimes of the weight of thirty pounds. A *Trutta lacustris* Generis, p. 1012. Wil. Ict. 198.

"*Salmo alpinus*, or char, Br. Zool. iii. No. 149, is common in the fresh waters, and weighs from two to six pounds.

"The *salmo Lavaretus*, or Gwiniad, Br. Zool. iii. No. 152, is found here in vast abundance; and grows to a size far superior to those of Europe. There is a lesser kind, called here the Sea Gwiniad; the head is not so dusky, eyes smaller, and back less arched. The nose of the male is blunt, and the stomach muscular, like a gizzard: the female has an arched nose. They are very numerous in autumn, just when the rivers are frozen over, and are called here Tickomeg. The *salmo arcticus*, or capelin, is observed to precede the salmon, and is sometimes thrown on shore in amazing quantities by hard gales.

"The *omisco maycus* is a new species of trout, taken in May in Albany river, not exceeding four inches and a half long. It has five branchiostegous rays: first dorsal fin has eleven rays, ventral eight, anal seven, pectoral thirteen: tail forked; in the jaws are minute teeth; back as low as the lateral line, is of a pale colour, marked with two longitudinal rows of black stelliform spots; below the lateral line the colour silvery; the belly white.

"The pike, Br. Zool. iii. No. 153, abounds in all the lakes. It by no means arrives at the size of the English. Mr. Hutchins does not recollect any above the weight of twelve pounds.

"The *cyprinus catastomus* of Dr. Forster, or sucker carp, is a new species: of which there are two varieties; the *mithro-mapeth* of the Indians, marked with a broad stripe of red along the lateral line, and found on the sea-coast; and the white, or *namapeth*, with larger scales, and wholly of a whitish colour: very scarce in the salt water, but in such plenty in the inland lakes and rivers, as to be even burdensome to the nets. They grow to the weight of two pounds and a half. The form.

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BAY.

form is oblong; the head bony, rugged, and decreasing to the tip of the nose; the mouth small and placed beneath; the body scaly; the tail lunated.

" Shell-fish are very scarce in this sea. *Mytilus edulis*, the edible mussel, Br. Zool. iv. No. 73, alone are plentiful; but of cockles, only the dead shells are seen. From the number of shells which are dug up, for the space of ten miles inland of this flat muddy country, may be collected a proof of the great retreat of the water; but for want of inhabitants, the period of its loss cannot be ascertained.

" Among the birds which escaped my notice while I was writing the zoologic part of this work, are two of the eagle kind, found in this country: the first is the Yellow-headed, with a dusky bill, cere, and irides; head and neck yellowish; back dark brown; each feather tipped with dirty yellow. This species appears in Hudson's Bay in April; builds its nest in trees, with sticks and grass, and lays one egg. It preys on young deer, rabbits, and fowls. Retires southward in October. Is called by the Indians, Ethenesue Mickesue.

" A variety of the golden eagle is also a native of the same place. The forehead is brown; crown and hind part of the neck striped with brown, white, and rusty yellow; lower part of neck, breast, and belly, deep brown; coverts of the wings, back, secondaries, and scapulars, of the same colour, the two last white towards their bottoms, and mottled with brown; primaries black; middle feathers of the tail brown, barred with two or three cinereous bands; exterior feathers brown, blotched with cinereous; legs clothed with pale brown feathers to the toes, which are yellow. Length three feet. A specimen of this was presented to the British Museum.

" To these may be added a genuine falcon, communicated to me by Mr. Latham. The bill very sharp, and furnished with a large and pointed process in the upper mandible; cere yellowish; head, front of the neck, breast, and belly, white; each feather marked along the shaft with a line of brown, narrowest on the head; the back and coverts of the wings of a dirty bluish ash-colour; the edges of the feathers whitish, and many of them tipped with the same; primaries dusky; exterior webs blotched with white; interior barred with the same

same colour; tail of the same colour with the back, barred with white; but the bars do not reach the shaft, and, like those in the Iceland falcon, oppose the dark bars in the adverse web; the legs bluish. The length of this fine species is two feet two inches.

"Multitudes of birds retire to this remote country, to Labrador, and Newfoundland, from places most remotely south, perhaps from the Antilles; and some even of the most delicate little species. Most of them, with numbers of aquatic fowls, are seen returning southward, with their young broods, to more favourable climates. The savages, in some respects, regulate their months by the appearance of birds; and have their goose month from the vernal appearance of geese from the south. All the grouse kind, ravens, cinereous crows, titmouse, and Lapland finch, brave the severest winter; and several of the falcons and owls seek shelter in the woods. The rein deer pass in vast herds towards the north, in October, seeking the extreme cold. The male polar bears rove out at sea, on the floating ice, most of the winter, and till June; the females lie concealed in the woods, or beneath the banks of rivers, till March, when they come abroad with their twin cubs, and bend their course to the sea in search of their consorts. Several are killed in their passage, and those which are wounded shew vast fury, roar hideously, and bite and throw up into the air even their own progeny. The females and the young, when not interrupted, continue their way to sea. In June, the males return to shore, and, by August, are joined by their consorts, with the cubs, by that time of a considerable size *."

* Pennant's Arctic Zoology, p. clxxxviii.

CENTRAL PARTS.

CENTRAL
PARTS.

TILL the journey of Mr. Hearne, an officer of the Hudson's Bay Company, in 1771, and the more difficult and laborious enterprizes of Mr. Mackenzie in 1789 and 1793; little was known concerning the interior parts of North America. In 1746 D'Anville lays down, with considerable accuracy, the Sea of Canada, or the three great conjunct lakes. He closes with the Lake of the Woods; and a river (now called Winnipic) runs to the N., while from the same lake a large river proceeds to the W. "discovered by a savage called Ochagac," but which does not exist. Not far to the S. of the Lake of the Woods he places the Mississippi, but says that the sources are unknown; they are now marked on that very spot. After a few other positions in that vicinity, he declares his ignorance of the country further to the west. Thus the great lakes of Winnipic, of the Hills, and the Slave lake, with the immense ranges of mountains, and other important features, were unknown to this able geographer, who was master of all the knowledge of his time. The lake of Winnipic appears to have been disclosed to European notice about 1760, by furriers from Canada; and much was said of an imaginary large river called the Bourbon; which may however have been the Saskahawin.

Hearne's
Journey.

Mr. Hearne performed his journeys in the years 1769—1772; but his book did not appear till 1795. He proceeded from fort Prince of Wales, or Churchill, and explored a group of lakes, called Doobant and other names, near Chesterfield inlet; and, further to the west, a lake of great extent, which he calls Athapuscow, the centre being in long. 125°, lat. 62°; being evidently the Slave lake of Mr. Mackenzie, in the same latitude, but long. 115°. The Copper Mine river, which Mr. Hearne lays down in long. 120°, is by Mr. Arrowsmith assigned to long. 113°. This river flowing into the Arctic ocean was the most curious discovery of Mr. Hearne, whose journies seemed sufficiently to demonstrate that

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no north-west passage was to be expected. In his preface he expresses his opinion that the Copper river probably flows into an inland sea like that of Hudson¹; which may also be the case with Mackenzie's river. Mr. Hearne's adventures on his new route are amusing and interesting. He met with many herds of musk cattle, a curious species described and engraved by Mr. Pennant in his *Arctic Zoology*. On the 14th of July 1771 he at length arrived at the Copper river, where the savages who attended him murdered, in a shocking manner, some *Iskimo* families; and on the 17th he was within sight of the sea. "I therefore set instantly about commencing my survey, and pursued it to the mouth of the river; which I found all the way so full of shoals and falls, that it was not navigable even for a boat, and that it emptied itself into the sea over a ridge or bar. The tide was then out; but I judged from the marks which I saw on the edge of the ice, that it flowed about twelve or fourteen feet, which will only reach a little way within the river's mouth. The tide being out, the water in the river was perfectly fresh; but I am certain of its being the sea, or some branch of it, by the quantity of whalebone and seal-skins which the *Iskimos* had at their tents, and also by the number of seals which I saw on the ice. At the mouth of the river the sea is full of islands and shoals, as far as I could see with the assistance of a good pocket telescope. The ice was not then broke up, but was melted away for about three quarters of a mile from the main shore, and to a little distance round the islands and shoals²." He found the *Iskimos* here of a dirty copper colour, and rather shorter in stature than those to the south. Even here the kettles are made of *lapis ollaris*, of a mixed brown and white; and their hatchets and knives are of copper. The dogs have sharp erect ears, sharp noses, and bushy tails, being a fine breed of that sort. Many kinds of sea-fowl were observed; and in the ponds and marshes swans, geese, curlews, and plovers. The quadrupeds are musk cattle, rein-deer, bears, wolves, wolvereens, foxes, alpine hares, squirrels, ermines, mice. Mr. Hearne after-

CENTRAL
PARTS.¹ Page vii.² *Ib.* 162. Why not taste the water? It might have been a large fresh water lake. Seals are common in the sea of Baikal; and the whalebone may have been procured in barter. The supposed tide is not unknown in high winds upon the southern lakes.

CENTRAL
PARTS.

wards visited one of the copper mines, about thirty miles S. E. from the mouth of the river, being merely a hill which seems to have been rent by an earthquake, or perhaps by subterranean water. The copper is found in lumps, and is beaten out by the help of fire and two stones. Upon his return Mr. Hearne passed further to the west; and on the 24th of December 1771 he arrived at the north side of the great lake of Athapuscow*, where our traveller observed a rustling noise to proceed from the northern lights, and he confutes several popular tales concerning the beaver. The lake of Athapuscow is very full of islands, filled with tall trees like masts, as appears from his curious view of a part of it. The natives reported it to be 120 leagues in length, from east to west; and 20 wide. It is stored with quantities of fish, pike, trout, perch, barbel, and two sorts called by the natives tittameg and methy. The northern shore consists of confused rocks and hills, but the southern is level and beautiful; and there are many wild cattle and moose deer, the former, particularly the bulls, being larger than the English black cattle. The hunch on the back is an elongation of the wither bones, according to Mr. Hearne. Proceeding southward he arrived at the great Athapuscow river, which he found about two miles in breadth, being evidently the Slave river of Mr. Mackenzie. Our traveller then passed eastward without any remarkable discovery, and arrived at Fort Prince of Wales 30th June 1772.

Mackenzie's
Journeys.
1. To the
Arctic sea.

Slave Lake.

Mr. Mackenzie's journies were of yet more consequence. In June 1789 he embarked in a canoe at fort Chepiwian, on the south of the Lake of the Hills, and proceeded along the Slave river to the Slave lake, whence he entered a river now called after his own name, till he reached the Arctic ocean. The Slave river he describes as very considerable, and says it received its name from an Indian tribe, called slaves merely from their extreme ferocity†. The Slave lake he found covered with ice in the month of June, and the chief fish were carp, white fish, trout, and pike. He justly remarked it as extraordinary that

* Rather *Atahapscow*.

† The appellation and its source are alike ridiculous; and a new nomenclature is wanted.

land,

land, covered with spruce, pine, and white birch, when wasted by fire produces nothing but poplars, where none before appeared. The river called after his name is sometimes fifty fathoms in depth, though not above three hundred yards in breadth. On the 11th of July the sun remained all night considerably above the horizon; and soon after he seems to have reached the sea; but our traveller's account is here not a little perplexed. It appears however that his river has a wide estuary, with many islands, one of which Mr. Mackenzie called Whale Island, as he here saw some whales as large as his canoe, and larger than the largest porpoise*. Such fish are however never observed in lakes; and there seems to be sufficient indications that he had reached the sea. Though so far to the north, there seem to be other savages besides Iskimos; and it would appear from their report that there is another large river on the western side of the Rocky Mountains, which also joins the Arctic Ocean". On his return Mr. Mackenzie observed petroleum, or rather maltha, and a large bed of coal on fire; and on the 12th September 1789 our author finished his first voyage, which had occupied one hundred and two days. A complete confirmation thence arises that there is no northern communication between the Atlantic and the Pacific; except at so high a latitude that it must be impeded by perpetual ice.

Equally important and interesting was Mr. Mackenzie's second voyage, for, though inland, the term is proper, as both were conducted on large rivers, by means of canoes. Our enterprising traveller left fort Chepiwian on the 10th October 1792, and proceeded up the Peace river, or Unjiga, in a S. W. direction, till he reached a high land beyond the Stoney or Rocky Mountains, the height of which he computes at 817 yards. After transporting their canoe, with some difficulty, they embarked on a small river on the other side, which soon brought them into the river Oregon, Columbia, or the Great River of the West, the origin and course of which were before totally misunderstood. It is to be regretted that he did not pursue this river to its mouth: but after proceed-

CENTRAL
PARTS.2. To the
Pacific.

* Mackenzie's Voyages, London, 1801, 4to. p. 64.

" P. 83.

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CENTRAL
PARTS.

ing a considerable way he returned against the stream, and afterwards travelled to the Pacific ocean by land; and reached one of the numerous inlets lat. $52^{\circ} 20'$, by Mr. Arrowsmith's map of the expedition. His adventures and difficulties, on this new route, are striking and singular, and will amply reward the reader's curiosity. On the west of the Unjiga beautiful scenery was observed, interspersed with hill and lawn, with groves of poplars, and enlivened with vast herds of elks on the uplands, and of buffaloes on the plains. The last so much abound, that in some places the country resembles a stall-yard. That fierce species called the grizzly bear was also seen. The Unjiga is sometimes from 4 to 800 yards wide; and the cold was often extreme, rather from the height of the general level than that of the mountains, which does not exceed 1500 feet. Among the birds observed were blue jays, yellow birds, and beautiful humming birds. Beavers are common, and tracks of moose deer were remarked. Where they reached the Oregon, it was about 200 yards wide. Towards the Pacific the natives are fairer than in the other parts of North America; and one man was at least six feet four inches in height. Their eyes are not dark, like those of the other Indians, but grey, with a tinge of red. The men wear only a robe made of the bark of the cedar tree, rendered as fine as hemp, sometimes with borders of red and yellow threads; and the women add a short apron. Some of their canoes are forty-five feet in length, the gun-wale being inlaid with the teeth of the sea otter, not with human teeth, as Captain Cook supposed. On the 20th of July 1793, Mr. Mackenzie reached an arm of the sea where the tide was abated, and had left a large space covered with sea weed". In September 1793 he returned to fort Chepiwian, after an absence of eleven months.

Remarks.

These voyages having considerably improved the geography of North America, it was thought proper to narrate them at some length. It is to be regretted that some obscurity arises from the want of a distinct nomenclature, and the equivocal use or abuse of some of the appellations. Thus the Athapusco lake of Hearne is undoubtedly the Slave

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" P. 2

lake of Pond, who is said to have been the first discoverer, and of Mackenzie; while the last seems to avoid that name, which is indeed banished from his maps, or confined to a small pool at the west end of the Lake of the Hills, which last some suppose to be the genuine Athapusco. In like manner there are three lakes, called by the same name of Winnipeg. Does this strange confusion, unknown to the geography of any other country, arise from the natives, from the inattention of the reporters, or from commercial jealousy, which would obscure or restrict the discoveries of other traders *? However this be, from these and other discoveries communicated by officers of the Hudson's Bay Company, the geography of North America begins to open with more clearness, as may be judged from Mr. Arrowsmith's last map, 1802. The large northern lakes are now laid down with superior accuracy. The great river Unjiga, after penetrating the western range of mountains, flows N. E. towards the Lake of the Hills, whence it receives a short but large stream; and being afterwards absurdly enough styled the Slave river, it bends N. W. to the great Slave lake, whence it issues by the name of Mackenzie's river. Such at least is Mr. Mackenzie's idea; and, if accepted, the name of Unjiga should be retained to its egress into the arctic ocean, after a comparative course of about 1700 British miles.

CENTRAL PARTS.

River Unjiga.

Next in consequence is the Saskashawin, rising on the eastern side of the great range, and passing E. to the great lake of Winnipic, whence it again issues under the name of Nelson river, and falls

Saskashawin.

* According to Mr. Mackenzie, p. 122. the word *athabasca*, in the language of the Knisteneaux, implies a flat low swampy country, subject to inundations; but he has not explained the original name of the Slave lake. The native words are however of such a prodigious length, that it is often proper to drop them, but they ought to be shortened or exchanged for names that are proper and expressive, while the new appellations are often mean or ridiculous, and such as never occur in Africa or Spanish America. Such are those of the Indian tribes *Fall, Blackfoot, Blood, Inland, Beaver, Copper, Strong-bow, Mountain, Hart, Dog-ribbed, &c. &c.*: other unmeaning denominations are *Rocky or Stony Mountains*, as if there were any mountains without rocks or stones; *Slave lake, Lake of the Hills, &c.* These beautiful terms pass from the French furriers of Canada into the page of geography! What would Milton say, who has often melodized his poetry with so-nororous geographical appellations? Can any poet, or classical author, use the poor and distorted nomenclature of the Pacific, or of North America?

" P. 216. 387.

CENTRAL
PARTS.

Oregon.

Missouri.

into Hudson's Bay, after a comparative course of more than 1000 B. miles *.

A third great river now tolerably ascertained is the *Oregon*, or *Columbia*, also called by the natives, *Tacoutche Tesse*, whose course is now described as being to the S. instead of the W. and about 700 B. miles in length. There are doubtless other important rivers towards the west: and a considerable one, as before mentioned, seems to join the arctic ocean.

The genuine sources of the *Missouri*, erroneously by the savages called the *Mississippi*, from the least important stream, seem also to be clearly evinced, from a journey of Mr. Fidler in the service of the Hudson's Bay Company; a discovery which, as already explained, adds greatly to the length of that grand and interesting river. The real direction and uniform extent of the great western range of mountains, seem also to be clearly delineated.

These observations were demanded by the present progressive state of the geography of North America. In a more immediate view of the central parts of this division of the new continent, it must not be forgotten, that they are the seats of many native and unconquered tribes, whose manners have been so frequently described by a host of travellers, that little needs to be said in a work of this limited nature. Their modes of hunting and warfare, their extreme cruelty towards their prisoners, the singularities of scalping, and the use of the calumet are sufficiently known †. A more difficult topic would be an enumeration of the various tribes; and a classification according to their languages.

* The river *Severn* also seems to flow from the large lake of *Winnipeg*; but the *Saskatchewan*, in the course above mentioned, would appear to have been the river *Bourbon* of the French; and it is said that the *Severn* flows into the lake of *Winnipeg*, from a small lake which also sends a stream to the sea.

† The feast of the dead has been described by *Charlevoix* and *Lafitau*. At this shocking solemnity the putrifying bodies are uncovered and exposed. The same practice prevails in *Patagonia*; and seems peculiar to *Africa* and *America*.

The *Tomahawk* was used by the American sailors in the attack of *Tripoli*, 1805, as appears by the official account.

In forming treaties it was not unusual for the two parties to erect two heaps of stones; and on renewing the treaty more stones were added by each ally. See *Belknap's New Hampshire*, vol. i. p. 330.

The old fortifications of the savages, discovered in *Kentucky*, and other interior parts, appear to be the entrenchments thrown up for defence near their towns, as mentioned by *Oldmixon*.

By a strange abuse of terms we speak familiarly of the savage *nations* CENTRAL PARTS. of North America, while few of these pretended *nations* can aspire to the name of a tribe, and the term clan, or even family, would be more appropriated.* The enumeration of these clans would be tedious; and a list of four hundred barbarous names would little interest the reader, except they could be classed according to languages. But a few remarks on the most noted tribes must not be omitted. The five Nations Five Nations. of the English writers are the Iroquois of the French, being the Mohawks, Oneydoes, Onondagas, Cayugas, and Sennekas; five clans joined in an old confederacy of offence and defence.† The Mohawks were on the south of the river so called, in the province of New York; while the others extended towards the lake Ontario. The Hurons were on the east of the lake of that name.‡ In the second volume of the Laws of the United States, Philadelphia 1796, 8vo, are several treaties made with the savages. That with the six nations, 1784, mentions the Sennekas, Mohawks, Onondagas, and Cayugas, and likewise the Oneidas and Tuscaroras. Another treaty is with the Wyandots, Delawares, Chippawas, and Ottawas. There are others with the Cherokees, Choctaws, Chickasaws, Shawanoes, Creeks, including the Natchez. A treaty of 1789 includes the Pattawatimas and Sacs; and there are other names of inferior note, particularly in the treaty of peace, 3d August 1795 with the tribes who had engaged in war, the Wyandots, Delawares, Shawanoes, Ottawas, Chippawas, Miamis, &c.

But, after the Mexicans, the chief tribe in North America was that of the Natchez, near the mouth of the Mississippi, whose worship of Natchez the sun, and other peculiarities, have been illustrated by Pratz, Charlevoix, and other writers § In a work of more extent it might be proper

* Mr. Adair's History of the American Indians, London, 1775, 4to. is composed on the wretched system that the Indians descended from the Israelites; and a few curious facts are rendered doubtful by the author's propensity to hypothesis. || Colden, p. 1.

† The pretended Doege Indians, at first said to have been discovered in Carolina, were afterwards removed towards the western coast, where they were inserted, with a supposititious lake, from an imaginary journey of a Mr. Lawrence in 1790. It is now admitted that they do not exist; and the fable seems to have arisen from some of the Bretons, who settled in Acadia, having taught their language to some savages.

‡ The Natchez are now extinct, according to Imlay, p. 425.

CENTRAL
PARTS.
Languages.

to describe the manners of this people, of the Five nations, of the Central tribes, of the Eskimos, and of the Western Races on the Pacific. In a brief view of the native languages, it is unnecessary to repeat, that the Eskimos and Greenlanders are the same people with the Samoieds of Asia.* The Algonkin was the most celebrated of the native languages, beginning at the gulf of St. Lawrence, and including a circuit of about 3000 miles. The Huron language, which was also that of the Five Nations, was of smaller extent, on the west of the Algonkin. Yet further to the west was the language of the Sioux, which was also that of the Knistineaux corruptly called Christinaux, but properly Killistinons, originally seated on the north of Lake Superior.† But, according to Mr. Mackenzie the Killistinons were originally the same people with the Algonkins, or inhabitants of the Atlantic coast; while the Chepawians, or Chepawas, and the numerous tribes who speak their language, occupy the whole space between the country of the Killistinons, and that of the Eskimos, extending to the river Columbia, lat. 52°. By their own traditions they came from Siberia; while intelligent travellers, on the contrary, consider the Techuks as proceeding from America: but such interchanges of nations are not unfrequent in barbarous periods. The tribes near the source of the Missouri are said to be from the south, and their progress N. W. probably retiring from the Spanish power.‡ The language of the Natchez, and other nations in the Spanish territory, has not been sufficiently illustrated; and in the isthmus the dialects are said to be various, and radically distinct, yet probably, on a nearer and more skilful examination, would be found

* The word Eskimo is said to imply an eater of raw flesh, Charlevoix I. 273. The Sioux is a French corruption of Nadouessis, Ib. 280.

† Charlevoix, I. 283. 276. 406.

‡ Mr. Mackenzie, p. cvii. has published a vocabulary of the Killistinon and Algonkin, which sufficiently shews their identity. The Killistinons extend to the lake of the Hills and N. to the Eskimos. Their manners are described by Mackenzie, p. xcii. For the Chepawas, see p. cxvi, where their chief residence is said to be between lat. 60° and 65°, and long. 100° and 110°, but they reach to lat. 52° and long. 123°, where they join a distinct people on the shores of the Pacific. From the traditions, p. cxviii. it does not appear that the Chepawas came from Siberia; for how could they land at the Copper Mine river? The vocabulary of their language, p. cxxix, might be easily compared with that of the Asiatic tribes.

to approach the Mexican: but no Pallas has arisen to class or arrange the languages of America. CENTRAL PARTS.

* Dr. Barton published, in 1797, "New Views of the Origin of the Tribes and Nations of America," Phil. 8vo; but I am very far from assenting to his positions, that the American languages spring from the Afatic, which last he reduces to one mass, as if there were not many distinct radical languages in Asia! One or two corresponding words may be found in the most dissimilar tongues, but even theory now rejects such trifling coincidences.

WESTERN COAST.

WESTERN
COAST.

THE Russians may be regarded as the first discoverers of the north-western shores of America. To the isles between Asia and this continent they assign different names, as Andrenovian, &c. but in their own most recent maps one general appellation is substituted, that of the Aleutian Isles. The furthest Aleutian Isles, which form a chain from the American promontory of Alaska, are also called the Fox Isles; while the nearest Aleutian isles of the Russians are those which we term Bering's and Copper. But in the best English maps the name of Aleutian is restricted to the former;* and it is to English navigators that we are indebted for the precise geography of these regions, which have been strangely embroiled by the erroneous astronomical observations of the Russian captains. Our excellent Cook, in particular, greatly extended our knowledge; and he was followed by Meares, Dixon, Vancouver, La Perouse, and other able navigators; and recently by Mackenzie, who has the singular merit of having first visited the Pacific by an inland progress from the east.

This coast, as already mentioned, seems to be chiefly alpine; in which respect, and in its numerous creeks and isles, it bears no small resemblance to Norway. The most remarkable mountain seems to be that called St. Elias by the Russian navigators: and which, it is affirmed, has been visible at sea at no less a distance than about sixty leagues. At *Fort des François*, lat. $58^{\circ} 37'$, La Perouse observes that the primitive mountains of granite or slate rise from the sea, yet the summits are covered with perpetual snow, and immense glaciers wind through the cavities." The natives he has minutely described; and says that he has always found

* In the Russian form *Aleoutskois*. The Russian *skois* is a possessive adjective, as *an* in the Latin, &c. thus *Harley*, *Harleian* library, &c. which in Russian would be *Harleyskois*.

" II. p. 129.

savages

savages "barbarous, deceitful, and wicked." This has been the uniform tenet of experience; but it is only in recent times that profound ignorance has aspired to the name of philosophy.* Their most singular practice is the sitting and distending of the under lip, so as to beautify the females with two mouths.† The lofty mountains, which La Perouse computes at more than ten thousand feet in height, terminate at Cross Sound; but the alpine ridges continue, though of smaller elevation, and probably extend with few interruptions as far as California. Mr. Mackenzie in lat. 53°, and Vancouver in a more southern latitude, found the same mountainous appearances. What is called the coast of New Albion has been faintly explored; and the Spanish power is always an obstruction to science. The inhabitants of the more northern regions of this coast appear to be Itkimos. In the part through which Mr. Mackenzie passed, he found some of the tribes of a low stature, with round faces, high cheek-bones, black eyes and hair; the complexion of a swarthy yellow. Nearer the Pacific the people, as already mentioned, had grey eyes tinged with red; and their manners are minutely illustrated in his narrative.

CENTRAL PARTS.

After this general survey of the unconquered countries, it will be necessary to give some account of the manners of some indigeneal tribes, which was omitted in the first edition of this work, restricted to two volumes, a form which, as already explained in the preface, occasioned the rejection of many important materials concerning America and Africa.

Manners, &c.

Mr. Long's travels among the savages of Canada, and the adjacent territory, are deservedly esteemed for the authenticity of the descriptions, as he resided for a long time among the natives, and spoke several of their languages. He gives the following account of their dances.

Chippeways, &c.

"The dances among the Indians are many and various, and to each of them there is a particular hoop.

* It was a watchmaker's apprentice, having seen no book but a French Plutarch, (See Rousseau's Confessions) who first praised savages, and decried civilized life. The practical consequences of this abominable doctrine may be observed in the actions of its disciples, the *sans culottes*, or savages of Paris, the most ignorant wretches of a great and civilized city.

† The Mexican monarchs appear in paintings with ornaments fixed to the under lip.

MANNERS,
&c.

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| 1. The calumet dance. | 7. The prisoner's dance. |
| 2. The war dance. | 8. The return dance. |
| 3. The chief's dance. | 9. The spear dance. |
| 4. The set out dance. | 10. The marriage dance. |
| 5. The scalp dance. | 11. The sacrifice dance. |
| 6. The dead dance. | |

All these I was perfect master of, frequently leading the set. If accidentally a stranger came among us, (unless I chose to be noticed) no one could distinguish me from the Indians.

" Presuming on my appearing exactly like a savage, I occasionally went down in a canoe to Montreal, and frequently passed the posts as an Indian. Sometimes I would distinguish myself at a charivari, which is a custom that prevails in different parts of Canada, of assembling with old pots, kettles, &c. and beating them at the doors of new married people; but generally, either when the man is older than the woman, or the parties have been twice married: in those cases they beat a charivari, hallowing out very vociferously, until the man is obliged to obtain their silence by pecuniary contribution, or submit to be abused with the vilest language. Charivari, in French, means a paltry kind of music, which I suppose is the origin of the custom.

" Not content with being a proficient in their sports, I learnt to make a canoe, bark a tree for the purpose, and performed the whole business as regular as the natives. I also made makissins, or Indian shoes, of deer skins, dressed and smoked to make the leather soft and pliable, and worked with porcupine quills and small beads, to which are sometimes suspended hawk bells. Those made by the Mohawks, at the Grand river near Niagara, are preferred for their superior workmanship and taste, and are sometimes sold so high as four dollars a pair, but in general they may be purchased, without ornaments, for one dollar: they are more pleasant to wear than English shoes; in summer they are cooler to the feet, and in winter, from being made roomy, they will admit a thick sock, to prevent the excessive cold from penetrating. The Indians, in their war dances, sew hawk bells and small pieces of tin on them to make a jingling noise; and at a dance where I was present, these, with the addition

addition of a large horse bell, which I gave the chief who led the dance, ^{MANNERS,}
made a noise not much unlike a Dutch concert. _{&c.}

"The savages are esteemed very active and nimble footed; but, admitting this general opinion to prevail, it is well known the Europeans are more swift in running a small distance: their chief merit, I am of opinion, consists in their being able to continue a long time in one steady pace, which makes them useful in going express through the woods; and as they require little sleep, and can subsist on roots and water, which they take en volant, they do not waste much time in refreshment. They are also admirable swimmers, and are not afraid of the strongest current. With these qualifications they are certainly a very useful race of men; and as long as the English retain any possessions in Canada, should be considered as the most valuable acquisition; indeed, as indispensibly necessary, and every endeavour should be exerted to retain them in our interest.

"With regard to bodily strength, they are excelled by many; and even in hunting, the Virginians equal them in every part of the chase, though all the world allow them the merit of being good marksmen. I remember seeing some Americans shooting at a loon, a bird nearly the size of an English goose. This bird is remarkable for diving, and generally rises some yards from the place where it dips. They fired at the distance of one hundred and fifty yards with a rifle, several times without success: an Indian standing by, laughed at them, and told them they were old women: they desired him to try his skill, which he instantly did; taking his gun, and resting it against a tree, he fired, and shot the loon through the neck. I confess I never saw a better shot in my life, and was highly pleased, as it gratified my pride, in giving the Americans a favourable opinion of the savages, for whom I always entertained a predilection."*

* Long's Travels, p. 35.

He afterwards produces the following specimen of Indian poetry.

THE SONG.

"*Debwaye, mizargay woen aighter, paybick oahby, seimebockquoit seimeargussey me tarbifeach
nipeach cagawwicka nepoo, mofzack penmarut, seimebockquoit metek.*"

"It is true, I love him only whose heart is like the sweet sap that runs from the sugar-tree, and is brother to the aspen leaf, that always lives and shivers."

Their

MAWERS,
&c.

Their superstitions also deserve attention.

" One part of the religious superstition of the savages consists in each of them having his totam or favourite spirit, which he believes watches over him. This totam, they conceive, assumes the shape of some beast or other, and therefore they never kill, hunt, or eat the animal whose form they think this totam bears.

" The evening previous to the departure of the band, one of them, whose totam was a bear, dreamed that if he would go to a piece of swampy ground, at the foot of a high mountain, about five days march from Mywigwaum, he would see a large herd of elks, moose, and other animals; but that he must be accompanied by at least ten good hunters. When he awoke, he acquainted the band with his dream, and desired them to go with him: they all refused, saying it was out of their way, and that their hunting grounds were nearer. The Indian having a superstitious reverence for his dream (which ignorance, and the prevalence of example, among the savages, carries to a great height), thinking himself obliged to do so, as his companions had refused to go with him, went alone, and coming near the spot, saw the animals he dreamed of; he instantly fired, and killed a bear. Shocked at the transaction, and dreading the displeasure of the Master of Life, whom he conceived he had highly offended, he fell down, and lay senseless for some time: recovering from his state of insensibility, he got up, and was making the best of his way to my house, when he was met in the road by another large bear, who pulled him down, and scratched his face. The Indian relating this event at his return, added, in the simplicity of his nature, that the bear asked him what could induce him to kill his totam; to which he replied, that he did not know he was among the animals when he fired at the herd; that he was very sorry for the misfortune, and hoped he would have pity on him; that the bear suffered him to depart, told him to be more cautious in future and acquaint all the Indians with the circumstance, that their totams might be safe, and the Master of Life not angry with them. As he entered my house, he looked at me very earnestly, and pronounced these words: "Amik, hunjey ta Kitchee Annakartiffey nind, O Totam, cawwicka nee wee geoffay fannegat debwoye:"—or, "Beaver, my faith is lost, my totam is angry, I shall never be able to hunt any more."

" This idea of destiny, or, if I may be allowed the phrase, 'totamism,' MANNERS, &c. however strange, is not confined to the savages; many instances might be adduced from history, to prove how strong these impressions have been on minds above the vulgar and unlearned. To instance one, in the history of the private life of Louis XV., translated by Justamond, among some particulars of the life of the famous Samuel Bernard, the Jew banker, of the court of France, he says, that he was superstitious as the people of his nation are, and had a black hen, to which he thought his destiny was attached; he had the greatest care taken of her, and the loss of this fowl was, in fact, the period of his own existence in January, 1739.

" Dreams are particularly attended to by the Indians, and sometimes they make an artful use of the veneration that is paid to them, by which they carry a point they have in view. I shall relate an instance for the satisfaction of the reader.

" Sir William Johnson, sitting in council with a party of Mohawks, the head chief told him, he had dreamed last night, that he had given him a fine laced coat, and he believed it was the same he then wore; Sir William smiled, and asked the chief if he really dreamed it; the Indian immediately answered in the affirmative: Well then, says Sir William, you must have it; and instantly pulled it off, and desiring the chief to strip himself, put on him the fine coat. The Indian was highly delighted, and when the council broke up, departed in great good humour, crying out, who-ah! which is an expression of great satisfaction among them.

" The next council which was held, Sir William told the chief that he was not accustomed to dream, but that since he met him at the council, he had dreamed a very surprising dream; the Indian wished to know it: Sir William, with some hesitation, told him he had dreamed that he had given him a track of land on the Mohawk River to build a house on, and make a settlement, extending about nine miles in length along the banks: the chief smiled, and looking very cheerfully at Sir William, told him, if he really dreamed it he should have it; but that he would never dream again with him, for he had only got a laced coat, whereas Sir William was now entitled to a large bed, on which

MANNERS,
&c.

his ancestors had frequently slept. Sir William took possession of the land by virtue of an Indian deed, signed by the chiefs, and gave them some rum to finish the business. It is now a considerable estate, but since the war, the Americans have deprived him of it, with all the buildings, &c., which are very valuable. It lies on the opposite shore to the German Flats, but the land is by no means equal in goodness with the soil there. Perhaps no part of America produces land better calculated for cultivation than the German Flats.*

Mr. Long also gives the following account of a singular ceremony.

"The ceremony of adoption is as follows:—A feast is prepared of dog's flesh boiled in bear's grease, with huckle berries, of which it is expected every one should heartily partake. When the repast is over, the war song is sung in the following words:

"Master of life, view us well, we receive a brother warrior who appears to have sense, shews strength in his arm, and does not refuse his body to the enemy."

"After the war song, if the person does not discover any signs of fear, he is regarded with reverence and esteem; courage, in the opinion of the savages, being considered not only as indispensable, but as the greatest recommendation. He is then seated on a beaver robe, and presented with a pipe of war to smoke, which is put round to every warrior, and a wampum belt is thrown over his neck.

"The calumet, or Indian pipe, which is much larger than that the Indians usually smoke, is made of marble, stone, or clay, either red, white, or black, according to the custom of the nation, but the red is most esteemed; the length of the handle is about four feet and a half, and made of strong cane, or wood, decorated with feathers of various colours, with a number of twists of female hair interwoven in different forms; the head is finely polished; two wings are fixed to it, which make it in appearance not unlike to Mercury's wand. This calumet is the symbol of peace, and the savages hold it in such estimation, that a violation of any treaty where it has been introduced, would, in their opinion, be attended with the greatest misfortunes.

* Long's Travels, p. 86.

"Wampum

" Wampum is of several colours, but the white and black are chiefly ^{MANNERS, &c.} used; the former is made of the inside of the conque, or clam shell; the latter of the muscle: both are worked in the form of a long bead, and perforated in order to their being strung on leather, and made up in belts.

" These belts are for various purposes. When a council is held, they are given out with the speeches, and always proportioned in their size, and the number of the rows of wampum which they contain, to the idea the Indians entertain of the importance of the meeting; they frequently consist of both colours. Those given to Sir William Johnson, of immortal Indian memory, were in several rows, black on each side, and white in the middle: the white being placed in the centre, was to express peace, and that the path between them was fair and open. In the centre of the belt was the figure of a diamond, made of white wampum, which the Indians call the council fire.

" When Sir William Johnson held a treaty with the savages, he took the belt by one end, while the Indian chief held the other: if the chief had any thing to say, he moved his finger along the white streak; if Sir William had any thing to communicate, he touched the diamond in the middle.

" These belts are also the records of former transactions, and being worked in particular forms, are easily deciphered by the Indians, and referred to in every treaty with the white people. When a string or belt of wampum is returned, it is a proof that the proposed treaty is not accepted, and the negotiation is at an end.

" But to return from this digression. When the pipe has gone round, a sweating-house is prepared with six long poles fixed in the ground, and pointed at the top; it is then covered with skins and blankets to exclude the air, and the area of the house will contain only three persons. The person to be adopted is then stripped naked, and enters the hut with two chiefs; two large stones, made red hot, are brought in, and thrown on the ground; water is then brought in a bark dish, and sprinkled on the stones with cedar branches, the steam arising from which puts the person into a most profuse perspiration, and opens the pores to receive the other part of the ceremony.

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" When the perspiration is at the height, he quits the house, and jumps into the water ; immediately on coming out, a blanket is thrown over him, and he is led to the chief's hut, where he undergoes the following operation : Being extended on his back, the chief draws the figure he intends to make with a pointed stick, dipped in water in which gunpowder has been dissolved ; after which, with ten needles dipped in vermillion, and fixed in a small wooden frame, he pricks the delineated parts, and where the bolder outlines occur, he incises the flesh with a gun flint ; the vacant spaces, or those not marked with vermillion, are rubbed in with gunpowder, which produces the variety of red and blue ; the wounds are then seared with pink wood, to prevent them from festering.

" This operation, which is performed at intervals, lasts two or three days. Every morning the parts are washed with cold water, in which is infused an herb called Pockqueefegan, which resembles English box, and is mixed by the Indians with the tobacco they smoke, to take off the strength. During the process, the war songs are sung, accompanied by a rattle hung round with hawk bells, called chessaquoy, which is kept shaking, to stifle the groans such pains must naturally occasion. Upon the ceremony completed, they give the party a name ; that which they allotted to me, war Aurik, or Beaver.

" In return for the presents given me by Matchee Quewish, which I had only acknowledged by some trinkets, and to shew how much I was pleased with the honour they had conferred on me, I resolved to add to my former gifts ; I accordingly took the chiefs to a spot where I had directed my men to place the goods intended for them, and gave them scalping knives, tomahawks, vermillion, tobacco, beads, &c. ; and lastly rum, the unum necessarium, without which (whatever else had been bestowed on them) I should have incurred their serious displeasure. Our canoes being turned up, and the goods properly secured, I told the Canadians to keep a constant watch, night and day, while we were encamped. This precaution is absolutely necessary, as the Indians generally do mischief when they are intoxicated. On this occasion our care was of infinite service, for, with the rum we gave them, they continued in a state of ebriety three days and nights, during which frolic, they killed four

of their own party; one of whom was a great chief, and was burnt by his son: having been a famous warrior, he was buried with the usual honours peculiar to the savages, viz. a scalping knife, tomahawk, beads, paint, &c. some pieces of woods to make a fire, and a bark cup, to drink out of in his journey to the other country."* MANNERS, &c.

The Knisteneaux, more properly Killistinons, or Kistinons, are a nation of some consequence, extending over an ample territory in the centre of the northern part of America. The account of their manners shall be presented in the words of Mr. Mackenzie; the original descriptions possessing more vivacity and authenticity, than can be found in an historical copy or abstract. Killistinons.

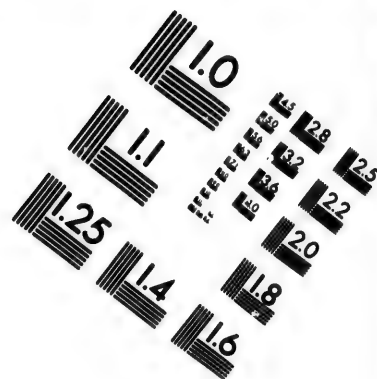
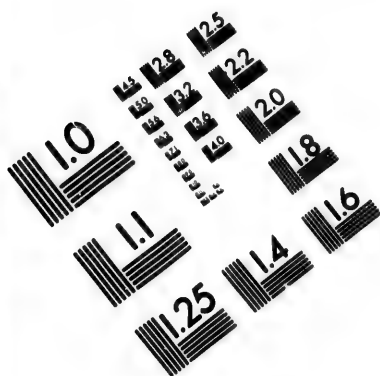
"These people are spread over a vast extent of country. Their language is the same as that of the people who inhabit the coast of British America on the Atlantic, with the exception of the Esquimaux, and continues along the coast of Labrador, and the gulph and banks of St. Lawrence to Montreal. The line then follows the Utawas river to its source; and continues from thence nearly west, along the high lands which divide the waters that fall into Lake Superior, and Hudson's Bay. It then proceeds till it strikes the middle part of the river Winipic, following that water through the Lake Winipic, to the discharge of the Saskatchewan into it; from thence it accompanies the latter to Fort George, when the line, striking by the head of the Beaver river to the Elk river, runs along its banks to its discharge in the Lake of the Hills; from which it may be carried back east, to the Isle à la Croix, and so on to Churchill by the Missinipi. The whole of the tract between this line and Hudson's Bay and Straits (except that of the Esquimaux in the latter), may be said to be exclusively the country of the Knisteneaux. Some of them, indeed, have penetrated further west and south to the Red river, to the south of Lake Winipic, and the south branch of the Saskatchewan.

"They are of a moderate stature, well proportioned, and of great activity. Examples of deformity are seldom to be seen among them. Their complexion is of a copper colour, and their hair black, which is common to all the natives of North America. It is cut in various forms,

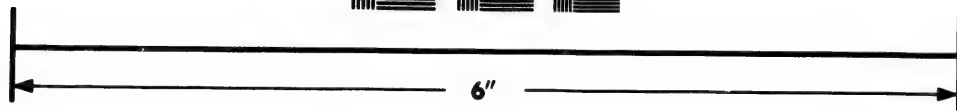
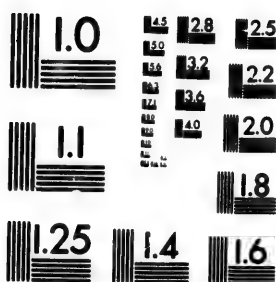
* Long's Travels, p. 45.

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according to the fancy of the several tribes, and by some is left in the long, lank, flow of nature. They very generally extract their beards, and both sexes manifest a disposition to pluck the hair from every part of the body and limbs. Their eyes are black, keen, and penetrating; their countenance open and agreeable, and it is a principal object of their vanity to give every possible decoration to their persons. A material article in their toilettes, is vermilion, which they contrast with their native blue, white and brown earths, to which charcoal is frequently added.

“ Their dress is at once simple and commodious. It consists of tight leggins, reaching near the hip; a strip of cloth or leather, called aslian, about a foot wide, and five feet long, whose ends are drawn inwards and hang behind and before, over a belt tied round the waist for that purpose: a close vest or shirt reaching down to the former garment, and cinctured with a broad stripe of parchment fastened with thongs behind; and a cap for the head, consisting of a piece of fur, or small skin, with the brush of the animal as a suspended ornament: a kind of robe is thrown occasionally over the whole of the dress, and serves both night and day. These articles, with the addition of shoes and mittens, constitute the variety of their apparel. The materials vary according to the season, and consist of dressed moose-skin, beaver prepared with the fur, or European woollens. The leather is neatly painted, and fancifully worked in some parts with porcupine quills, and moose-deer hair: the shirts and leggins are also adorned with fringe and tassels; nor are the shoes and mittens without somewhat of appropriate decoration, and worked with a considerable degree of skill and taste. These habiliments are put on, however, as fancy or convenience suggests; and they will sometimes proceed to the chase in the severest frost, covered only with the lightest of them. Their head-dresses are composed of the feathers of the swan, the eagle, and other birds. The teeth, horns, and claws of different animals, are also the occasional ornaments of the head and neck. Their hair, however arranged, is always besmeared with grease. The making of every article of dress is a female occupation; and the women, though by no means inattentive to the decoration of their own persons, appear to have a still

greater degree of pride in attending to the appearance of the men, ^{MANNERS,} whose faces are painted with more care than those of the women. ^{&c.}

"The female dress is formed of the same materials as those of the other sex, but of a different make and arrangement. Their shoes are commonly plain, and their leggins gartered beneath the knee. The coat, or body covering, falls down to the middle of the leg, and is fastened over the shoulders with cords, a flap or cape turning down about eight inches, both before and behind, and agreeably ornamented with quill work and fringe; the bottom is also fringed, and fancifully painted as high as the knee. As it is very loose, it is inclosed round the waist with a stiff belt, decorated with tassels, and fastened behind. The arms are covered to the wrist, with detached sleeves, which are sewed as far as the bend of the arm; from thence they are drawn up to the neck, and the corners of them fall down behind, as low as the waist. The cap, when they wear one, consists of a certain quantity of leather or cloth, sewed at one end, by which means it is kept on the head, and, hanging down the back, is fastened to the belt, as well as under the chin. The upper garment is a robe like that worn by the men. Their hair is divided on the crown, and tied behind, or sometimes fastened in large knots over the ears. They are fond of European articles, and prefer them to their own native commodities. Their ornaments consist in common with all savages, in bracelets, rings, and similar baubles. Some of the women tattoo three perpendicular lines, which are sometimes double: one from the centre of the chin to that of the under lip, and one parallel on either side to the corner of the mouth.

"Of all the nations which I have seen on this continent, the Knisteneaux women are the most comely. Their figure is generally well proportioned, and the regularity of their features would be acknowledged by the more civilized people of Europe. Their complexion has less of that dark tinge which is common to those savages who have less cleanly habits.

"These people are, in general, subject to few disorders. The lues venerea, however, is a common complaint, but cured by the application of simples, with whose virtues they appear to be well acquainted.

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They are also subject to fluxes and pains in the breast, which some have attributed to the very cold and keen air which they inhale; but I should imagine that these complaints must frequently proceed from their immoderate indulgence in fat meat at their feasts, particularly when they have been preceded by long fasting.

"They are naturally mild and affable, as well as just in their dealings, not only among themselves, but with strangers. They are also generous and hospitable, and good-natured in the extreme, except where their nature is perverted by the inflammatory influence of spirituous liquors. To their children they are indulgent to a fault. The father, though he assumes no command over them, is ever anxious to instruct them in all the preparatory qualifications for war and hunting; while the mother is equally attentive to her daughters in teaching them every thing that is considered as necessary to their character and situation. It does not appear that the husband makes any distinction between the children of his wife, though they may be the offspring of different fathers. Illegitimacy is only attached to those who are born before their mothers have cohabited with any man by the title of husband.

"It does not appear, that chastity is considered by them as a virtue; or that fidelity is believed to be essential to the happiness of wedded life. Though it sometimes happens that the infidelity of a wife is punished by the husband with the loss of her hair, nose, and perhaps life, such severity proceeds from its having been practised without his permission: for a temporary interchange of wives is not uncommon; and the offer of their persons is considered as a necessary part of the hospitality due to strangers.

"When a man loses his wife, it is considered as a duty to marry her sister, if she has one; or he may, if he pleases, have them both at the same time.

"It will appear from the fatal consequences I have repeatedly imputed to the use of spirituous liquors, that I more particularly consider these people as having been, morally speaking, great sufferers from their communication with the subjects of civilized nations. At the same time they were not, in a state of nature, without their vices, and some of them of a kind which is the most abhorrent to cultivated and reflecting

fledgling man. I shall only observe, that incest and bestiality are among MANNERS.
&c. them.

“ When a young man marries, he immediately goes to live with the father and mother of his wife, who treat him, nevertheless, as a perfect stranger; till after the birth of his first child: he then attaches himself more to them than his own parents; and his wife no longer gives him any other denomination than that of the father of her child.

“ The profession of the men is war and hunting, and the more active scene of their duty is the field of battle, and the chase in the woods. They also spear fish, but the management of the nets is left to the women. The females of this nation are in the same subordinate state with those of all other savage tribes; but the severity of their labour is much diminished by their situation on the banks of lakes and rivers, where they employ canoes. In the winter, when the waters are frozen, they make their journies, which are never of any great length, with sledges drawn by dogs. They are, at the same time, subject to every kind of domestic drudgery: they dress the leather, make the clothes and shoes, weave the nets, collect wood, erect the tents, fetch water, and perform every culinary service; so that when the duties of maternal care are added, it will appear that the life of these women is an uninterrupted succession of toil and pain. This, indeed, is the sense they entertain of their own situation; and under the influence of that sentiment, they are sometimes known to destroy their female children, to save them from the miseries which they themselves have suffered. They also have a ready way, by the use of certain simples, of procuring abortions, which they sometimes practise, from their hatred of the father, or to save themselves the trouble which children occasion: and, as I have been credibly informed, this unnatural act is repeated without any injury to the health of the women who perpetrate it.

“ The funeral rites begin, like all other solemn ceremonies, with smoking, and are concluded by a feast. The body is dressed in the best habiliments possessed by the deceased, or by his relations, and is then deposited in a grave lined with branches; some domestic utensils are placed on it, and a kind of canopy erected over it. During this ceremony, great lamentations are made, and if the departed person is very

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much regretted, the near relations cut off their hair, pierce the fleshy part of their thighs and arms with arrows, knives, &c. and blacken their faces with charcoal. If they have distinguished themselves in war, they are sometimes laid on a kind of scaffolding; and I have been informed that women, as in the East, have been known to sacrifice themselves to the manes of their husbands. The whole of the property belonging to the departed person is destroyed, and the relations take in exchange for their wearing apparel, any rags that will cover their nakedness. The feast bestowed on the occasion, which is, or at least used to be, repeated annually, is accompanied with eulogiums on the deceased, and without any acts of ferocity. On the tomb are carved or painted the symbols of his tribe, which are taken from the different animals of the country.

" Many and various are the motives which induce a savage to engage in war. To prove his courage, or to revenge the death of his relations, or some of his tribe, by the massacre of an enemy. If the tribe feel themselves called upon to go to war, the elders convene the people, in order to know the general opinion. If it be for war, the chief publishes his intention to smoke in the sacred stem at a certain period, to which solemnity, meditation and fasting are required as preparatory ceremonies. When the people are thus assembled, and the meeting sanctified by the custom of smoking, the chief enlarges on the causes which have called them together, and the necessity of the measures proposed on the occasion. He then invites those who are willing to follow him, to smoke out of the sacred stem, which is considered as the token of enrolment; and if it should be the general opinion, that assistance is necessary, others are invited, with great formality, to join them. Every individual who attends these meetings brings something with him as a token of his warlike intention, or as an object of sacrifice, which, when the assembly dissolves, is suspended from poles near the place of council.

" They have frequent feasts, and particular circumstances never fail to produce them; such as a tedious illness, long fasting, &c. On these occasions it is usual for the person who means to give the entertainment, to announce his design, on a certain day, of opening the medicine bag, and smoking out of his sacred stem. This declaration is considered as a
sacred

sacred vow that cannot be broken. There are also stated periods, such as the spring and autumn, when they engage in very long and solemn ceremonies. On these occasions dogs are offered as sacrifices, and those which are very fat and milk-white are preferred. They also make large offerings of their property, whatever it may be. The scene of these ceremonies is in an open inclosure on the bank of a river or lake, and in the most conspicuous situation, in order that such as are passing along, or travelling, may be induced to make their offerings. There is also a particular custom among them, that, on these occasions, if any of the tribe, or even a stranger, should be passing by, and be in real want of any thing that is displayed as an offering, he has a right to take it, so that he replaces it with some article he can spare, though it be of far inferior value: but to take or touch any thing wantonly is considered as a sacrilegious act, and highly insulting to the great Master of Life, to use their own expression, who is the sacred object of their devotion.

"The scene of private sacrifice is the lodge of the person who performs it, which is prepared for that purpose, by removing every thing out of it, and spreading green branches in every part. The fire and ashes are also taken away. A new hearth is made of fresh earth, and another fire is lighted. The owner of the dwelling remains alone in it, and he begins the ceremony by spreading a piece of new cloth, or a well-dressed moose-skin, neatly painted, on which he opens his medicine-bag, and exposes its contents, consisting of various articles. The principal of them is a kind of household god, which is a small carved image about eight inches long. Its first covering is of down, over which a piece of beech bark is closely tied, and the whole is enveloped in several folds of red and blue cloth. This little figure is an object of the most pious regard. The next article is his war-cap, which is decorated with the feathers and plumes of scarce birds, beavers, and eagles' claws, &c. There is also suspended from it a quill or feather for every enemy whom the owner of it has slain in battle. The remaining contents of the bag are, a piece of Brazil tobacco, several roots and simples, which are in great estimation for their medicinal qualities, and a pipe. These articles being all exposed, and the stem resting upon two forks, as it must not touch the ground, the master of the lodge sends for the person

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he most esteems, who sits down opposite to him; the pipe is then filled and fixed to the stem. A pair of wooden pincers is provided to put the fire in the pipe, and a double-pointed pin, to empty it of the remnant of tobacco which is not consumed. This arrangement being made, the men assemble, and sometimes the women are allowed to be humble spectators, while the most religious awe and solemnity pervade the whole. The michiniwais, or assistant, takes up the pipe, lights it, and presents it to the officiating person, who receives it standing, and holds it between both his hands. He then turns himself to the east, and draws a few whiffs, which he blows to that point. The same ceremony he observes to the other three quarters, with his eyes directed upwards during the whole of it. He holds the stem about the middle, between the three first fingers of both hands, and raising them upon a line with his forehead, he swings it three times round from the east, with the sun, when, after pointing and balancing it in various directions, he reposes it on the forks: he then makes a speech, to explain the design of their being called together, which concludes with an acknowledgment of past mercies, and a prayer for the continuance of them, from the Master of Life. He then sits down, and the whole company declare their approbation and thanks, by uttering the word *ho!* with an emphatic prolongation of the last letter. The michiniwais then takes up the pipe, and holds it to the mouth of the officiating person, who, after smoking three whiffs out of it, utters a short prayer, and then goes round with it, taking his course from east to west, to every person present, who individually says something to him on the occasion, and thus the pipe is generally smoked out, when, after turning it three or four times round his head, he drops it downwards, and replaces it in its original situation. He then returns the company thanks for their attendance, and wishes them as well as the whole tribe, health and long life.

“ These smoking rites precede every matter of great importance, with more or less ceremony, but always with equal solemnity. The utility of them will appear from the following relation :

“ If a chief is anxious to know the disposition of his people towards him, or if he wishes to settle any difference between them, he announces his intention of opening his medicine-bag, and smoking in his sacred stem;

stem; and no man who entertains a grudge against any of the party thus assembled can smoke with the sacred stem, as that ceremony dissipates all differences, and is never violated. MANNERS,
&c.

"No one can avoid attending on these occasions, but a person may attend and be excused from assisting at the ceremonies, by acknowledging that he has not undergone the necessary purification. The having cohabited with his wife, or any other woman, within twenty-four hours preceding the ceremony, renders him unclean, and, consequently, disqualifies him from performing any part of it. If a contract is entered into, and solemnized by the ceremony of smoking, it never fails of being faithfully fulfilled. If a person, previous to his going a journey, leaves the sacred stem as a pledge of his return, no consideration whatever will prevent him from executing his engagement.

"The chief, when he proposes to make a feast, sends quills or small pieces of wood, as tokens of invitation to such as he wishes to partake of it. At the appointed time the guests arrive, each bringing a dish or platter, and a knife, and take their seats on each side of the chief, who receives them sitting, according to their respective ages. The pipe is then lighted, and he makes an equal division of every thing that is provided. While the company are enjoying their meal, the chief sings, and accompanies his song with the tambourin, or shishiquoi, or rattle. The guest who has first eaten his portion is considered as the most distinguished person. If there should be any who cannot finish the whole of their mess, they endeavour to prevail on some of their friends to eat it for them, who are rewarded for their assistance with ammunition and tobacco. It is proper also to remark, that at these feasts a small quantity of meat or drink is sacrificed, before they begin to eat, by throwing it into the fire, or on the earth.

"These feasts differ according to circumstances, sometimes each man's allowance is no more than he can dispatch in a couple of hours. At other times the quantity is sufficient to supply each of them with food for a week, though it must be devoured in a day. On these occasions it is very difficult to procure substitutes, and the whole must be eaten whatever time it may require. At some of these entertainments there is a more rational arrangement, when the guests are allowed to carry home

MANNERS,
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with them the superfluous part of their portions. Great care is always taken that the bones may be burned, as it would be considered a profanation, were the dogs permitted to touch them.

"The public feasts are conducted in the same manner, but with some additional ceremony. Several chiefs officiate at them, and procure the necessary provisions, as well as prepare a proper place of reception for the numerous company. Here the guests discourse upon public topics, repeat the heroic deeds of their forefathers, and excite the rising generation to follow their example. The entertainments on these occasions consist of dried meats, as it would not be practicable to dress a sufficient quantity of fresh meat for such a large assembly; though the women and children are excluded.

"Similar feasts used to be made at funerals, and annually, in honour of the dead, but they have been, for some time, growing into disuse, and I never had an opportunity of being present at any of them.

"The women, who are forbidden to enter the places sacred to these festivals, dance and sing around them, and sometimes beat time to the music within them, which forms an agreeable contrast.

"With respect to their divisions of time, they compute the length of their journeys by the number of nights passed in performing them; and they divide the year by the succession of moons. In this calculation, however, they are not altogether correct, as they cannot account for the odd days *."

Californians.

Estalla † has described the manners of the Californians, from three letters of a Dominican missionary, printed in 1794.

The Russians having established a considerable fur trade with China, by means of their settlements on the north western coast of America, the Spaniards were induced to follow their example; and their settlements in California, furnished them with an abundant supply of skins, chiefly of the sea otter, as styled by the Spanish writers, the fur being black, and equal to the finest beaver.

The manner of catching the sea otters is so peculiar to the Indians, that neither the English, Dutch, or Spaniards, have been able to imitate their skill. The missionary describes it from repeated observation. They

* Mackenzie's Voyages, p. xci.

† Vol. xxvi. p. 94, &c.

make very small canoes, sometimes of wood, sometimes of a kind of CALIFORNIANS. flags, and in these frail vehicles they dare the fury of the ocean. The canoe resembles a little bark, and can only bear one man. Provided with a long rope with two hooks, he advances towards the otters, the females being generally surrounded with their young whom they teach to swim. Upon the approach of the canoe she dives under water, and the Indian fixes the hooks in the foot and leg of one of the young. He then retires, giving out the rope, which he sometimes pulls, so that the young animal begins to roar with pain, and the mother attracted by his cries endeavours to extricate him, but seldom fails to be herself caught by one of the hooks, when the hunter arrives, and kills her with a sharp blow on the head. But sometimes whole days are passed without any prey; and the method is cruel, as the death of the animal is occasioned by its maternal affection. The fur of the young is of no use. The mining station of St. Ann was abandoned on account of the cruelty of the savages who massacred the workmen. In some parts however of the country the natives are more mild and docile than in others.

The care of providing the food is left to the women, while the men walk about like idle vagabonds; and though the women suckle, be with child, near the period of parturition, or loaded with years and infirmities, still she must provide water, food, firewood, and all that is necessary for subsistence; so that she is sometimes obliged to travel four, five, or six leagues, and return loaded like a mule. Nor can she even venture to make objections, as the only law is that of the strongest, and blows, and even death, would be the consequence, though the husband be restrained by the fear of her relations, who might retaliate even on the fourth or fifth generation. Hence murders are frequent among them, and often committed on the slightest occasions. The food however is very simple, consisting of herbs, wild fruits, a kind of rabbits, venison, with vipers, snakes, rats, lizards, and the like.

The Californians are in general skilful fishers, and one will sometimes supply a number of relations with this kind of food; while, by
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CALIFORNIANS

an idle superstition, the fisher must not taste of his own prey, lest he should encounter danger on the sea. They are very dexterous in the chase, using arrows, slings, and cudgels; and they pique themselves so much upon their skill and reputation, that if they pursue their game without success, and are rallied on the occasion, they will sometimes hang themselves, or throw themselves from a precipice.

Though poverty be universal, there is yet a class which may be comparatively called poor, who do not venture to speak in the assemblies, but are obedient to the others; and if they be maltreated flee to the woods, where they live alone like wild beasts. The Californians are easily instigated either to good or evil. They will often learn the Christian faith in a fortnight; and, after strong evidences of piety, forget it in an equal space of time. They will sometimes crowd to the missions, and sometimes abandon them, with equal lightness and inconsideration. They receive benefits with coldness, and treat their benefactors with neglect. Though bold in appearance, they are in fact cowardly, and easily yield to any appearance of danger or chastisement.

They can scarcely be said to have any government, nor even a village, except those who have embraced a fugitive and imperfect idea of Christianity. They are constantly changing their residences; nor is the neighbourhood of water an object of preference, as they supply the deficiency from a kind of aloe. The more skilful, who quit the usual residence in caves, form rows of huts, which are assigned to the families of their relations, but each acts according to his fancy, and they only unite in the dance, the feast, and in their petty wars. These rows generally contain two or three hovels, about fourteen yards square, the roofs being formed of branches with a little earth. They are very low, with a door resembling a mouse trap, that no passengers may see into the house, and they are always full of smoke.

They give every indulgence to their appetite, and have no set hours for their meals. They are all naked, but the women wear a little apron made of the fibres of a plant, and a little skin of some animal over their bosom. The latter is also worn by the chiefs. The head-dress of the ladies

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ladies is a little helmet of rushes, while the men wear feathers. Gray ^{MANNERS, &c.} has spoken of "feather cinctured chiefs," but this habiliment cannot be traced in any region. Some of the men wear caps made of clay. They also use necklaces made of little shells. Their complexion is very dark, but some of the women are tolerably fair. They all paint themselves in the most ridiculous manner, sometimes the face black, the breast yellow, and the legs white; or the contrary. Some cut off a piece of the ear, some pierce the under lip, others the nostrils, and wear by way of ornament mice, lizards, shells, &c. The design in painting is to render themselves terrible to their enemies.

The furniture of their hovels consists in a little net to keep seeds, some wild tobacco, with a pipe of clay, quivers for arrows, bones to form them, some feathers, a dish made of reeds, two pieces of wood to light a fire, which they easily accomplish by rubbing them against each other, a bow and arrows, a club to kill rabbits, and, if it belong to a fisher, some cords and hooks. But all these are utensils of the rich, for there are many who have nothing. When they wish to move, the man bears the bow and arrows, the woman all the rest.

The missionaries have discovered one district in which polygamy is not permitted, but regarded as unhappy, and leading to a speedy death. But, in general, a man may keep, under the title of cooks, as many women as he can maintain. Though adultery be common, it is an object of chastisement, and the husband may repudiate or kill his wife. The marriages are often conducted in a ridiculous manner, and after a previous trial; but the women are dismissed at pleasure, being regarded as slaves. The mother will sometimes kill or abandon her infant, especially if she be sick and have no person to attend her, nor does her husband make any enquiries on the occasion. Parturition is easy, and the mother soon returns to her labours. Among the Ados the husband reposes, and receives the felicitations, a custom not unknown to other tribes, it being imagined that if any accident were to befall him, the infant would be affected.

Many of the tribes seem to have no knowledge of religion, nor of a first cause: they have neither temples, nor idols, nor altars, nor do they worship the sun or moon. Some, however, have an idea that a great

MANNERS,
&c.

chieftain, called Menichipa, made the heavens and the earth, and afterwards another being like himself, called Togomag. He then created a man and a woman, who had a son called Emai Cuano, to whom the great chieftain resigned all his power, and who especially presides over marriages. He also greatly improved the creation, which Menichipa had left very imperfect, for the beasts were all ferocious, and the fruits all bitter. To prevent the new creation from perishing with cold, he placed a fire under the earth, but hearing complaints of heat, he spit, and there appeared seas, rivers, lakes, and fountains: but finding man not yet satisfied, he began to weep, the origin of rain. Hitherto he had been very busy in making men with his own hands, but being extremely fatigued, he taught them to procreate. Those who die with courage go to the north, where they eat venison and rabbits. The slavery of the women is ascribed to divine institution. They suppose that Menichipa was very melancholy before the creation, having nothing to amuse him but a large ball of earth, out of which he made all things solely to divert himself. By mistake he made some people who were very proud and useless; but finding the error in their composition, which, if he had studied modern chemistry, he might perhaps have imputed to an excess of gas, he shut them up under ground, that their malignity might not be infectious; but some contrive to escape from time to time and occasion wars and other calamities. This diabolical tribe is by some of the Californians called Chilos, and by others Tebigols.

They have a kind of magicians called quamas, who supply the want of priests, and are regarded as oracles. From dread of their magical arts, the poor savages supply them with food, and serve them in every thing; and even their wives think themselves honoured by their embraces. Our author follows a common error, while he says, that the Indians have naturally no beards, nor hair, except upon their heads; for it is now well known that they eradicate it with a split stick. The magicians, as usual, pretend to cure diseases by ridiculous ceremonies and gestures; and greatly impede the progress of christianity, which they justly regard as destructive to their profession.

These magicians distinguish themselves at the festivals, which are merely assemblies of men and women to gratify all their appetites.

The chief festival occurs at the new moon in the seed time; and the principal personage is the magician, who arranges the whole by his voice or gestures. He often performs ridiculous and fatiguing ceremonies, in the midst of the men and women, who are all naked and painted in a thousand colours; some of the women on these occasions wearing beautiful diadems of feathers from the most brilliant birds. The night is the chosen time, and there is always an ample provision of wood for fire and light. The performer wears a kind of a cloak made of scalps, while the lesser magicians are painted black. They pretend to bring intelligence from the other world, and to repeat conversations with the dead. Dances follow around the fire; and laughter is mingled with terror at the sight of the extraordinary figures, some painted black, some red and white, some yellow, leaping in the most ridiculous postures, shouting, and laughing. At intervals they eat or sleep, or indulge the sexual passions, without any shame or sense of impropriety. This festival commonly lasts from twenty to five and twenty days.

There are also wrestling matches, in which the victor becomes the favourite of the women, while the vanquished are so much mortified, that they sometimes hang or precipitate themselves; and though the others be aware of their intention, they do not oppose their resolution. Sometimes disputes arise in the midst of the dance, which lead to murders; but there is no punishment, as there is no superior.

The magicians also display their power on the occasion of funerals, while it rests with them to declare if the person be really dead. Some days after the funeral, the magician declares that the dead person wishes to share a feast, and a festival is appointed accordingly. He appears in his cloak made of scalps, and holds that of the deceased, with whom he pretends to converse, asking concerning his habitation in the north, and if he be not the most skilful of all magicians. Our performer afterwards seizes on the best of the provisions, pretending that they are for the use of the dead during his journey, which the simple people readily believe. These magicians pretended to be free from any impressions of pain, but the Spanish soldiers have taught them the contrary; some of

MANNERS,
&c.

them however possess some knowledge of medicinal herbs, and apply them with success.

This Dominican missionary praises the climate of California as pure and benign; but in this he contradicts many of his countrymen. The natives however are generally temperate, and enjoy good health; but the nation of the Pericues in the southern part of the peninsula has been almost extinguished by the venereal disease.

Nootka.

Of the savages of Nootka island there are several relations in our language, but a short extract may be permitted from the memoir remitted by Don Joseph Tobar y Tamariz to the viceroy of New Spain, in 1789, concerning the English settlement in that quarter.*

After having observed that the islands called Sandwich by Cook had been discovered by the Spanish captain Juan Gaytan, in the year 1600, and by him called *Islas de la Mesa*, or the Table Islands, on account of the appearance of the largest, he proceeds to mention the arrival of captain Colnet, with the intention of forming a settlement at Nootka. The savages, by this account, are very cruel to their captives taken in war, and commonly eat the children whose members they even offer for sale. They also throw the dead bodies into the sea, in order, as they imagine, to attract the whales, as this fish forms a favourite repast. It is said they have an idea of a divinity, and that the good pass upwards clothed in white, while the wicked are confined under the earth. Their language is rather particular, and seems somewhat to resemble that of the Hottentots. Their clothes are made of the rind of the pine; and the men do not differ from the women, except some of the chiefs, who are clothed in the skins of bears and otters. Their chief weapons are darts, headed with whalebone, and their canoes are capable of receiving twenty-five or thirty men, being generally large pines hollowed with fire. Their habitations are not fixed, but carried from place to place, according to the abundance of fish. For war, or the dance, they stain their bodies with various colours, so as to produce a horrible effect. They have such a strong propensity to steal, that even weight and size cannot protect the articles coveted; and they even stole a large cannon from an

* Estalla, xxvi. p. 157.

American captain. Adultery is severely punished, and the offender, MANNERS, &c. after having his legs and arms broken, is thrown into the sea. In general savages of cold climates, as well as civilized nations, are more severe with regard to the sexual sympathies than those in hot climates, where the passions are stronger, and nudity leads to licentiousness.

In the southerly parts of North America the Mexicans were the most distinguished nation, and had perhaps advanced to some degree of civilization, though their state would, in Europe or Asia, have been regarded as that of barbarism, especially from the horrible cruelties of their government and religion. They seem to have been followed by their neighbours of the republic of Tlascala; while many other tribes in that quarter, and as far as the isthmus of Darien, still continue in the savage state, as the reader may judge from the accounts of Dampier, Wafer, and other voyagers. Such tribes are by the Spaniards called *Indios Bravos*, as remaining unsubdued.

On the east of the Mississippi there was a remarkable nation now extinct, which seems somewhat to have approached the Mexicans, as the reader will perceive on examining the account of the Natchez, given by Natchez. Dupratz in his voyage to Louisiana. There were about five hundred chiefs called *suns*, who all obeyed the *grand sun* their common sovereign. The sun was the chief object of adoration; and the chief called the *grand sun* wore his image on his breast. The principal festival was in July at the time of harvest; and a perpetual fire was maintained as among the Peruvians. On the death of the *grand sun*, his wives and some of his vassals were buried with him, to accompany him to the land of spirits.

The Alibamons were a considerable tribe on the river Alabama in Alibamons. Georgia.* They were distinguished by their hospitality and affability, the men being robust, and the women handsome. Their chief food was *sagamiti*, being toasted maiz cooked with flesh. They were generally monagamous, and jealous of their wives; but the young unmarried women were permitted to use their liberty. They used to compute their genealogy only by the female side, regarding it as the most secure. The best hunters and warriors chose the most handsome women; and

* Estalia, xxiii, p. 213.

the

MANNERS,
&c.

the wives were very industrious in preparing their husbands' food, tanning skins, making shoes, spinning the wool of the wild beeves, making baskets, and other occupations. They believed in a future life, presenting in greater perfection the few enjoyments which they found in this, such as fine women and plenty of food. They used to inter their dead in a sitting posture, with a pipe and tobacco, that he might make his peace with the people in the other world. Suicides were regarded as cowards, and thrown into the river.

The most remarkable characteristic of the savage nations is the apathy with which they bear pain and torture, singing songs of defiance to the moment of death. This surprising exertion seems to arise not from want of sensibility, but from its being regarded as a point of honour, while the contrary conduct would incur the infamy of cowardice. Among many tribes three days of torment must be endured before the candidate can claim the pretensions of a warrior, or the dignity of a chief; these practical stoics regarding the sensations of the body as wholly subservient to the mind.

The Alibamons used to proceed on their hunting parties at the end of October, taking their families in their canoes, and sometimes travelling eighty or a hundred leagues. They did not return till March, which was their seed time; and they generally brought great quantities of skins, and flesh dried in the smoke. They had their magicians, and their *manitus*, or little deities. The sick were pretended to be cured by incantations of spirits.

Moquis, &c.

The savage tribes in a quarter little known, on the Rio Colorado, or Red River, and in the neighbourhood of Santa Fe, have been briefly described by Estalla.* In the vicinity of Upper Pimeria are the Papagos, who eat all kinds of animals, after warming them in the sun-shine, without any cookery; and their low hovels are only constructed of branches of trees. But they sow maiz and cotton, and eat the grains of the latter; and are rather of a mild character. Some other tribes in that neighbourhood are friendly to the Spaniards, and declared enemies of the Apaches, the most dreaded nation in that region.

* xxvii, 138. 146.

The Moquinos, or Moquis, dwell in the centre of the Mother Chain of mountains, in the part bordering on New Mexico. They were formerly converted by the Franciscans, but they have killed all the missionaries, and abjured the Christian faith. MANNERS,
&c.

The Cocomaricopas dwell on the river Gila, the space between which and the Colorado is a vast upland desert; and there is another tribe of the same savages on the west of the Colorado. They are rather addicted to agriculture, sowing wheat, maize, various kinds of French beans, melons, calabashes, and a kind of plant the seed of which when ground resembles the flour of wheat. At the distance of a quarter of a league from the river, there is a fountain so abundant as to suffice for watering the greatest part of their land. The country around, for the space of nine leagues, may be called an assemblage of beautiful groves. The Cocomaricopas are an affable and liberal race, receiving strangers with great affability, and without any view to self interest. The northern Moquis come to trade with them at fixed intervals. The Colorado is a large and deep river, capable of being navigated for a considerable space. The manner in which it is passed by the savages has already been mentioned. The Azul or Blue river joins the Colorado; but it is unknown whether it come from the province of the Moquis, or be a branch of the Green river. In that quarter live the Nijotes, who carry on constant war with the Cocomaricopas, who are also infested by the Yumas. The latter tribe erect as a trophy the skeleton of an enemy slain in battle, raised on a high pole in front of the enemy's country.*

In New Mexico there are thirty villages of Christian Indians, of various tribes, who are generally industrious, and clothed in the skins of wild goats, while the women wear mantles of wool or cotton. All have their instruments of agriculture, and travel on horseback. Their huts are square, with open galleries on the top, there being no door below; and the only access is by a ladder, which is removed in the night for Of New
Mexico.

* Our author here inserts the following notice, which is rather obscure: "The tribes we have hitherto met with, on the banks of the Gila, are, in the superior region, the Apaches, implacable enemies of the Spaniards, followed by an unpeopled tract of about twenty-four leagues; then the Pimas living in hovel, then another unpeopled tract of twenty-four leagues; after which, we arrive among the Cocomaricopas; and after passing another unpeopled tract of thirty leagues, we reach the Yumas."

MANNERS,
&c.

Cumanches.

fear of sudden invasion. These huts front each other for the sake of mutual defence. While the Franciscans direct the spiritual government, a certain number of the Indians proceeds to the field, to keep the neighbouring nations in awe, without any expense to the royal treasury, as they are provided with horses, arms, and provisions, and have displayed their valour and fidelity on many occasions. The enemies demand peace, but do not observe it longer than it suits their convenience, and hostilities are constantly renewed. Every year a tribe of warlike Indians, called Cumanches, enters this province, to the number of about fifteen hundred men. Their country is unknown, as they always march prepared for war, which they carry on against all the other tribes. They encamp in tents made of the skins of buffaloes, and which are carried on the backs of large dogs trained for that purpose. The men are only clothed down to the navel, and the women to the knee. When they have concluded the traffic which brings them to this province, consisting in the skins of wild goats, and buffaloes, and little children, whom they have made captives, for they kill the men and women, they withdraw till another year.

There are several missionary stations in New Mexico, the most distant being Zuni seventy leagues from the capital on the W. S. W., whence towards the N. W. are various tribes of the Moquis, and the great river of Ezpelata. These lands of the Moquis border on the south with the river Gila and Pimeria; on the east with the kingdom of New Mexico, a small part being subject to that government. The Moquis and the Navahos border on the N. W. with vast lands, hitherto unknown, says Estalla; but some Indian captives having travelled six moons before they reached the N. W. of New Mexico, he concludes that they must extend towards Tatary. Of the intermediate countries he observes that only confused notions have been obtained, though the lands must generally be fertile, if a judgment were to be formed from the enormous size of the deer and mountain goats. The wild sheep, which also abound, are, by his account, of a monstrous size; and will dart down precipices on their strong horns, like the bouquets of the Alps. The bears and wild beees are also very large, and the same observation extends to the birds. In these regions was placed the fabulous empire of Quivira, which may be ranked with Dorado, and other fables of the early conquerors;

querors; and our author has judiciously remarked, that there is a greater probability of finding fertile deserts than civilized empires. MANNERS,
&c.

The principal savage tribes on the Missouri appear to be the following. The Osages, on a river of the same name, could send into the field a thousand warriors, and are a ferocious people. On ascending sixty leagues are found the Kansas, also on the river of the same name; sixty leagues further is the Flat, or Shallow River, so called, because it is full of quicksands, and of very difficult navigation. At its confluence with the Missouri are the Ottos. On ascending the Flat River for the space of forty leagues, are the Panis, who make war upon the Spaniards of Santa Fe. Further up are the Mahas; and above them the Poncas. On the right bank of the Missouri are the Aricaras, and the Mandans, who are the last yet discovered. The two latter nations are often attacked by the Sioux. The Missouri river seems to run for a considerable space, parallel and at no great distance from the Mississippi.* On the Mis-
souri.

The distant tribe of savages, called Osages, has recently courted the protection of the United States; and their deputies were favourably received, and dismissed with presents.

The present respectable and scientific president of the United States, in 1804, sent some intelligent gentlemen to explore the river Missouri. They were expected to return about the end of the year 1805; but, in the mean while, the following information, extracted from the American newspapers, of July 1805, may not be unacceptable.

"Letters have been received from Captains Lewis and Clark, by express sent by them to the commandant at St. Louis, with dispatches for the President of the United States.

* Account of Louisiana. p. 26.

"There exists, about 1000 miles up the Missouri, and not far from that river, a Salt Mountain. The existence of such a mountain might well be questioned, were it not for the testimony of several respectable and enterprising traders, who have visited it, and who have exhibited several bushels of the salt to the curiosity of the people of St. Louis, where some of it still remains. A specimen of the same salt has been sent to Marietta. This mountain is said to be one hundred and eighty miles long, and forty-five in width, composed of solid rock salt, without any trees, or even shrubs on it."—Account of Louisiana, abstracted from documents in the offices of state. Philad. 1804. 8vo.

VOL. III.

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"These

MANNERS,
&c.

" These enterprising young men set out from St. Louis, in May 1804, to ascend and explore the Missouri river to its source; and from thence to proceed to the Pacific ocean. The express left them in April last, at the Mandan nation of Indians, 1609 miles from the mouth of the river, (where they had encamped during the winter season,) preparing to proceed on their route. The party were in good health when the express came away—only one man died in the journey.

" Many hordes of Indians live on and contiguous to the Missouri. Our travellers have been interrupted only once by them. The Sioux nation are numerous, and are divided into several tribes, some of whom are at war with each other.—Those who live lowest on the river, were suspicious of our adventurers, fearing they were carrying supplies of arms and ammunition to their enemies;—some small presents, and a little address, reconciled them, and they consented to let the party proceed up the river.

" The country adjoining the river is represented as being very fertile for about 1000 miles; it then becomes poor and naked of timber. It abounds with buffaloes; and where the party passed their winter quarters, there were wild goats.

" The river at the mouth is about one mile wide, very rapid, deep, and always muddy:—Where our travellers halted, it is represented as being a quarter of a mile wide, muddy, deep, and very rapid, but some shallow water had been discovered as they ascended.

" The falls of the river are stated by the Mandan Indians, to be about 600 miles above them, about 17 feet high, and are at the pass through the Rocky Mountains, which were in sight of their encampment.

" Fine salt springs have been discovered, and great appearances of lead, copper, and iron mines.

" Our travellers have procured an animal, which is called the wild dog of the *prairies*. This animal is about the size of a cat, and has dens under ground. They have procured also two magpies, natives of that climate. The Indians say there are wild sheep to be found higher up the river about the falls. A horn of the mountain ram has been procured,

cured, of a monstrous size; the express states it to be as thick as the calf of the leg of a stout man; the length was not described. The dog, magpies, and remarkable horn, are in the possession of a Captain MacClellan, who has undertaken to carry them to the city of Washington to the President with the dispatches. MANNERS,
&c.

"Some appearances of a volcano have also been discovered; the earth was so hot, that after scratching away a little of the surface, it would burn the hand.

"Many large streams run into the Missouri; the largest are on the south-west side."

*Botany of Canada and the North.**

The indigenous plants of the regions north of the river St. Lawrence form a singular mixture of the Floras of Lapland and the United States. From the intensely cold winters and hot summers of this extensive appendage to the British empire, it might, indeed, be *à priori* expected that the annual plants, and such as are capable of being sheltered in winter under the snow, should be, for the most part, the same as those of more southern countries; while the trees and shrubs, having to brave the utmost rigour of the climate unprotected, should be characteristic of the Arctic regions. A regard to this circumstance will enable us to explain the seeming contradictions in the agriculture of Canada, which are scarcely credible by the mere uninformed English farmer, such as that gourds and water melons should be a common field crop, while the hardiest winter corn is almost always destroyed by the cold. Botany.

The forests are numerous, but the trees never attain that bulk and luxuriance of growth which distinguishes them in the southern states. The family of firs and evergreens compose perhaps the largest proportion; and of these the principal are, the Silver leaved fir, the Weymouth pine, the Canadian pine, the hemlock spruce fir, and the white cedar of Canada (*thuya occidentalis*), which must not be confounded with the white cedar of the United States (*cupressus disticha*). Next to these

* Forster's *Flora Americae Septentrionalis*.

BOTANY.

in importance are the sugar maple, the red maple, the birch, the American lime and elm, the iron wood and *cercis Canadensis*. The numerous species of oaks are either wholly unknown, or are contracted into despicable shrubs, all the ship timber of Canada being brought from the New England provinces. The *sassafras*, laurel, and red mulberry, are also met with in the islands of the St. Lawrence, but in a similar state of depression, the whole of the summer's growth being generally destroyed by the next winter. The ash, the yew, and mountain ash are found in the northern tracts both of the old and new world; but the light festoons of wild vine, with its pendant clusters, and the fragrant blossoms of the Syrian *asclepias*, form a characteristic feature of the forest scenery of Canada.

The *lilium Canadense*, similar to the Sarrane lily of Kamtschatka, and the ginseng, common to America and Tatar, point out a similarity between the northern Floras of Asia and America.

The juniper, the cranberry, the bearberry, the black and red currant, the raspberry, and wild cherry, which have already been mentioned as natives of Lapland, and the whole North of Europe, are found in great plenty in similar situations on the opposite shores of the Atlantic.

Of the other Canadian plants little is known, and a meagre catalogue of Linnæan names would contribute equally little to the amusement as to the instruction of the general reader. One, however, the *zizania aquatica*, deserves to be mentioned: this graminaceous vegetable is nearly allied to the rice; it grows abundantly in all the shallow streams, and its mild farinaceous seeds contribute essentially to the support of the wandering tribes of Indians, and to the immense flights of swans, geese, and other aquatic fowls, which resort hither for the purpose of breeding. Productive as it is, and habituated to the climate, inhabiting also situations which refuse all other culture, it is surprising that the European settlers have as yet taken no pains to improve a plant which seems intended by nature to become at some future period the bread corn of the North.

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THE AMERICAN ISLANDS,

OR

WEST INDIES.

THESE islands, so important to commerce, are Cuba, St. Domingo, Jamaica, and Porto Rico, all of considerable extent; and followed by the distinguished group called the Antilles, Caribbee, or Leeward Islands, but more properly by the French, Windward Islands, as being towards the east, the point of the trade wind.* To the south of this group is Trinidad, a recent English acquisition; to the west of which stretch the Leeward Islands of the Spaniards. In the N. E. of this grand assemblage are the Bahama or Lucayos Islands, narrow and barren strips of land, formerly frequented by pirates, till subjected to the legal power of England; but chiefly remarkable as having been the first discovery of Colon.

The best geographical order appears to be that suggested by their natural extent and importance, independent of the partial and fleeting distinction of European possession.

* Our mariners apply both terms to the Caribbee Islands; the Windward ending with Martinico, the Leeward reaching from Dominica to Porto Rico. Edwards, i. 5.

C U B A.

CUBA.

THIS noble island is not less than 700 B. miles in length ; but the medial breadth does not exceed 70. On his first voyage, after exploring the Bahama Isles, Colon discovered Cuba¹ ; but though delighted with the beauty of the scenery, and amazed at the luxuriant fertility of the soil, he soon abandoned it to proceed to Hayti, afterwards called Hispaniola or St. Domingo, where he expected to find a greater abundance of gold ; which, with gems and spices, formed the only objects of the early navigators. While Hispaniola was selected as a factory to secure the acquisition of gold, it was not certainly known whether Cuba was an island, or part of the continent, till 1508, when it was circumnavigated by Ocampo ; and in 1511 it was conquered by three hundred Spaniards under Velasquez². The number of the inhabitants was no doubt exaggerated, as even in our enlightened times happened with regard to Otaheite, and other new discoveries. The Spaniards certainly did not achieve miracles in their American conquests ; nor was the awkward use of unwieldy cannon and fire-arms, at that time, so fatal and preponderant a circumstance as may be imagined. The Malays with their creeses defy fire-arms. The natives were not only timid, but few ; and nine tenths may be safely subtracted both from Spanish valour and Spanish cruelty.* These reflections have been excited by the charge of extermination brought against the Spaniards of Cuba ; while the natives equally vanish around all European colonies, the real destroying angels being the small-pox, and spirituous liquors. Our Buccaneers have taught us to regard the Spaniards as bees, who must be destroyed to get

¹ Robertson's America, i. 122.² Ib. 249.

* Mendez de Pinto was a Portuguese ; but the ancient Spanish writers, tainted with the imagination of their inmates the Moors, were little less hyperbolical. It is however ludicrous that their own exaggerations should have led to the charges of cruelty and destruction. The noted Las Casas, the Dominican friar, was a man of heated imagination ; and his credit may be judged of by his assertion that a district of eighteen leagues in St. Domingo is watered by *twenty-five thousand rivers* ! Charlevoix, ii. 373. Even the eyes of such a witness cannot be believed.

at the honey; but if ever the cause of truth must be sacrificed, it should be offered at a nobler shrine than that of vulgar prejudices, or interested enmity.

The industry of the Spaniards is far from being proverbial; yet such is the fertility of Cuba, that it may be regarded as a most important and flourishing possession. The quantity of sugar is considerable; and the tobacco is esteemed of a more exquisite flavour than that of any other part of America. This, with the other large islands, were also called the Great Antilles, the origin of which term has been before explained; and they were also known by the name *Sotavento*, or the *Leeward Islands*, in contradistinction to the exterior group called *Barlovento*, or *Windward Islands*. Havana, the capital, was built in 1519; and was taken in 1669 by Morgan, a celebrated Buccaneer. It again surrendered to the English in 1761, and treasures were found of no small amount. This extensive island is divided by a chain of mountains passing E. and W. The rivers are of short course, but there are several excellent harbours. Among the products must also be reckoned ginger, long pepper, mastic, cocoa, manioc, and aloes. There are mines of excellent copper, which supply the other Spanish colonies with domestic utensils; and gold is not unknown in the rivers. The forests abound with wild cattle and swine; and among the trees are ebony and mahogany. There is a governor-general; and eighteen jurisdictions are governed by distinct magistrates. The natural history of this large island is very defective, as is the case with all the Spanish possessions.

In the latter part of his work, Estalla* begins a more ample and exact account of the Spanish possessions in America, with a description of the noble island of Cuba, derived, as he informs us, from the memoirs of Don B. Ferrer, a gentleman of that island. From this description, the most important articles shall be selected, mostly in the order followed in the original. It is well known that Colon neglected Cuba, expecting to find a greater quantity of gold in St. Domingo, where it was actually discovered in the central mountains of Cibao. But this precious metal was also found in Cuba at Jagua, and the city of Trinidad, and even now a little is worked at Holguin.

* Vol. xx.

CUBA.

On the first conquest of the island a ludicrous circumstance occurred. Narvaez, a Spanish captain, being employed with thirty men to survey the country, had procured an ass, which, like the horse, was an animal totally unknown to the natives. Arriving at one of their villages, and lodging his ass in the same hovel with himself, he went to sleep. Meanwhile a number of warriors had assembled from the adjacent country, to surprise the party, having some suspicion of their designs. Hearing the tumult, Narvaez rose in his shirt, mounted his ass, and rode out to discover the cause. Upon the sight of this apparition, the warriors fled with the greatest confusion, and never ventured any further opposition against the Spaniards or their asses.

The number of *ingenios*, or sugar mills, now exceeds six hundred; and besides the home consumpt, more than two millions of arrobas of sugar are yearly sent to Europe.

Among the products may also be named a thousand herds of cattle, five hundred and eighty yards for swine, seven hundred receptacles for feeding cattle, three thousand seven hundred farms, and six thousand plantations. It is remarkable, that there are neither fierce nor venomous animals in the island.

In Cuba winter is almost unknown, and the whole year may be said to resemble spring; though the months of November, December, and January be cool, on account of the northern winds. At Havana, the rains begin in June, and last till November. Soon after noon a cloud begins to be formed in the south, which gradually increases till the rains descend, with thunder and lightning.

There was a remarkable hurricane on the 8th March 1784, at noon, the sun being so totally obscured, that the darkness seemed that of midnight, yet no great damage was sustained.

Havana.

Havana presents the appearance of an European town, and its prosperity may be judged of from the number of cabriolets which exceed three thousand. The college, or university, of Havana, was founded in 1774, by the bishop Echavarria, with two professors of theology, one of philosophy, and two of Latin. The arsenal is superb; and ships of war are built of cedar, and other woods supplied by the island. The garrison is one of the chief in Spanish America, consisting of two regi-
ments

ments of veterans, two of light infantry, one squadron of dragoons, and CUBA.
other troops; the total about ten thousand. In addition to the well
known castle of Moro, fort San Carlos was built in 1763, and San
Diego in 1780. The theatre, however, has been gradually abandoned,
and was ruined in 1792.

Havana forms as it were an universal mart for all the rich products of
New Spain, and the returns from the parent country.

The people of Havana are, like other Spaniards, fond of bull fights;
and, like the Mexicans, also infatuated with cock fighting. The balls
form another favourite amusement, and no invitation is required, a gen-
teel dress being sufficient. Some of the dances are native and graceful.

The age of the inhabitants generally extends to sixty or seventy years;
and though some exceed that period, their faculties are commonly anni-
hilated. The manner of living is generally as objectionable as in New
Spain. In the morning with chocolate, coffee, or milk, is taken a
savoury dish, called *chuleta*, or ribs of pork, which they have fresh
throughout the year, or some other animal food fried in lard: at mid-
day, the usual dish is *agiaco*, a kind of fruit of so hot a taste, that tears
bathe the cheeks of the guests. In the evening there is a regular sup-
per of rice seasoned with salt and lard, broiled flesh, fallads, and other
dishes. At the two last meals, the usual desert is sweetmeats, or sugar
pressed from the cane, the consumption of which is incredible.

The expence of funerals was enormous, till wisely reduced by a recent
decree of the bishops.

The women are enticing, though of a pale complexion. Their ex-
pressive eyes, and graceful forms; their modest and winning manners,
and generous dispositions, excite warm and lasting passions, nor are they
without talents for music, embroidery, and even poetry.

On the 21st June 1791, there was a great inundation of the river Al-
mendarez, which runs by Havana: the great bridge was carried down,
and about two hundred persons perished. The river changed its course,
and opened for itself a new bed, not less than sixty *varas*, or Castilian
yards, in depth!

Our author ridicules the mode of education which resembles that of
Spain. He sensibly observes, that "the education of a people is the founda-

CUBA.

dation of its manners, and the origin of its customs. Its impression on the individual may be said to form the character itself." After the boys have learned the first rudiments, they are introduced to the abstract studies of grammar and philosophy. The ridiculous terms of *predicamentos*, *predicables*, *materia prima*, *blisiri*, and others of the same stamp, are disputed with great violence and obscurity. The church is the chosen scene of these wise and profound arguments, which astonish and edify the vulgar, while the scolding of two old women, an affair of equal consequence, passes without observation. They are besides too much indulged by their mothers, and too much checked by their fathers, accustomed to command slaves. By the use of the miserable grammar of La Cerda, improperly ascribed to Nebrija, they lose three or four years in learning Latin verses of no utility whatever. Three years are afterwards wasted in learning the peripatetic philosophy, full, as he observes, of absurdities and mere verbal difficulties. In some convents modern philosophy is taught, but obscured by the peripatetic manner.

The product of sugar has been already mentioned. The tobacco of Cuba, commonly called that of Havana, is reputed the best in the world; and, in 1792, there were remitted to the royal manufactory of Spain more than a hundred and twenty thousand arrobas; while more than fourteen thousand remained for home consumpt, and for the Spanish colonies in America. The tobacco is of different qualities, but the best is that called *de la vuelta de abaxo*.

The celebrated tobacco of Cuba generally attains the height of five feet, being strait and handsome in its growth, and the leaves of a green approaching to yellow. It is cultivated from the seed; and during the first rain is transplanted to another ground, already prepared for the purpose. In a month it has attained the height of a foot, the under leaves are cut off, and any worms or weeds carefully removed. In six weeks it has acquired its full growth, and begins to blacken. The plants are then cut, laid in heaps, and left to sweat during one night: next day they are carried to the storehouse, which is so constructed as to admit the air on all sides. Here they are spread and left to dry for the space of four or five weeks, when they are withdrawn, else they would fall to dust. They are then spread on a mat well covered, and left to dry

for a week or two, after which the leaves are taken off, separated from the stems, and tied in bundles, the under leaves being rejected as bad. For all these operations the wettest days are chosen, that the quality of the plant may be the more mild. Cuba is so rich in other productions, that the cultivation of tobacco is neglected, whence it is generally scarce in the market.

The sugar canes grow to the height of seven or nine feet. In new lands they are even higher, but of inferior quality, and only fit to make rum. The manner of planting might be greatly improved.

Cuba also produces abundance of wax, equal to that of Venice; and twenty thousand arrobas are annually exported. Bees were first brought from Florida in 1764.

In 1792, the product of cotton was computed at six thousand arrobas, while that of fruits amounted to the surprising sum of twenty-five millions six hundred thousand pesos or dollars; but under this article he includes coffee, chocolate, &c. In the same year not less than one hundred and twenty-one cargoes of negroes were imported.

Turtle is so common in Havana, that it is generally eaten on the fast days, though as tender and nourishing as the flesh of chickens. Snakes abound, but their bite is not dangerous; and even the caymans or alligators, are not so fierce as those on the continent. The sting of the scorpion and millipede, is instantly cured by rubbing the part with garlic. The *Sinfonte*, or mocking bird, displays all the melody of its song. Besides the excellent cedar, of which even ships are constructed, Cuba produces ebony, granadillo a richly speckled wood, guayaco; and above all, abundance of *caoba*, or mahogany, so commonly used for furniture in England, that it may be said to have excluded all the other beautiful woods. The shrub called *ocuge*, yields a resin which is found highly effectual in diarrhoea.*

The population of the whole island is computed at three hundred thousand. San Jago is improperly regarded as the capital; but, after Havana, the chief town is Puerto del Principe, which since the year 1796, has become the seat of the Audience, called that of St. Domingo, since the Spanish part was yielded to the French.

* If this be the meaning of *relajaciones*, which the context renders doubtful.

CUBA.

St. Jago is two hundred and sixty-nine leagues from Havana, situated in a hilly country, subject to slight earthquakes, which are however little feared. The women are regarded as the most handsome in the island. The haven is spacious and secure, the entrance being by a channel of two leagues in length, defended by a castle at the extremity.

The town of San Carlos de Matanzas has a good port, and is supposed to contain seven thousand inhabitants. Holguin and Guiza may each contain six thousand, while Bayamo has been computed at twelve thousand.

There are two bishoprics, Cuba and Havana; the former having been originally at Baracoa, and afterwards at St. Jago. That of Havana was erected in 1788.

The highest mountain is that called the Tetas or Paps of Managua. At present there are neither mines, nor appearance of mines, but the fertility of the land exceeds the value of the most precious metals. The Cucuyos, a kind of fire flies, are very numerous, and used as ornaments by the ladies. A cabinet of the shells and petrifications of Cuba was formed by Parra, an inhabitant of Havana, and is now in the royal collection at Madrid.

M. Thiery, in his journey to Oaxaca, has given some interesting details concerning Havana, where he remained some time. The numerous domes, tall steeples, red roofs, and high white houses, give it the appearance of an European town. The theatre, since declined, was in his time, 1777, remarkable for the solemn invocations of the Virgin and other saints. The actresses had chaplets in their hands; and if two lovers met, they were sure to draw their swords. Every play however obscure or fantastic was, as in Spain, styled *famosa*, or famous; and there was a famous comedy called the Hair of Absalom. He observes, that the mountains of Cuba are so elevated on the southern side, that the clouds generally appear beneath the summits.

Havana is in a semicircular form, the diameter being formed by the shore. The squares are irregular, and the streets narrow, some of the chief being paved with iron wood, cut into squares of ten inches, and disposed in a kind of frame work. This singular pavement is so durable, that in two years the wheels had made no impression. The port is one
of

of the finest in the world, being a round basin of a league in breadth, CUBA. joined by several rivers. It is defended by a fortress and three bastions, each having eighteen cannon receiving balls of twenty-four pounds. The city is now esteemed impregnable, and is said to be defended by eight hundred cannon; the fortifications being singularly beautiful, and of an expanse bordering on profusion.

The houses are disfigured with heavy balconies, and wooden railings. Within is generally a court with Gothic arcades. The furniture is often gilt, or laced with gold, but there are few mirrors, and no carpets. The men use the Spanish cloak, sometimes so richly laced as to cost five hundred dollars; the hair generally in a net. The women rarely wear gowns, being contented with a petticoat and corset, with an apron of gauze or muslin. Their hair plaited or rolled up under their head-dress, with some sprigs of rue or wormwood over the ear. With other ornaments they wear massy bracelets of gold, and are fond of displaying a beautiful arm. Two round patches are worn on the temples, changed at night for bits of white linen like little plaisters, and in the morning for leaves of the orange flower. They are seldom handsome, and still less graceful; and never go out except to mass, or in the evening to ride in small chaises, of which, as it is their only amusement, they are very fond.

Provisions were plentiful and cheap. The trade of Havana and Mexico was chiefly in the hands of the Catalonians, the chief articles of import being hardware, linen, silk, clocks and watches, wines, and spices. Most of the silks were from Genoa, particularly a stiff and rustling kind for the priests, who thought that the noise gave an air of dignity. There are no avenues of trees, as they will not thrive, except when raised from the seed.

M. Thierry says, that the population of the Havana is about twenty-five thousand, and that of the whole island, including the negroes and mulattoes, does not exceed two hundred and sixty-six thousand, according to an enumeration which he saw in the house of the governor. He also here repeats the information, already given in the account of New Spain, that the whole population of that vast empire does not exceed, or even

CUBA.

amount to, one million of souls. The regular troops at Havana, were three thousand, and a well exercised militia of sixteen hundred.

The churches are long and dark, with numerous chapels on each side, some of them so richly gilded, as to have cost in that article alone more than ten thousand dollars. The processions are infinite, of all classes and denominations; and almost every house has its chapel. The bishopric of Havana is valued at forty thousand dollars. The prelate had just published a charge against the horrid and crying sin of smuggling, by which he had lost some of his tythes. Though the laws against this new sin be very severe, or rather because they are very severe, all the inhabitants are smugglers. Such was the impolicy of the government, that all the articles were farmed; and even the tobacco and chocolate of one province were contraband in another: and on the miserable coast of Yucatan, even cables and cords were farmed out by the government. Happily this pernicious system was soon after remedied, as the extreme of an evil often produces the cure.

The leprosy had passed from Carthagena, and the hospital contained one hundred and fifty patients. The air however is generally pure, owing to the north winds which reign during half the year, so that the nights and mornings are very cold.

Our author observes, that during the six weeks he remained at Havana, there were only fifteen ships from eighty to two hundred tons; and during the two months and a half that he remained at Vera Cruz, he did not observe more. There is a regular packet between the two ports, but the passage is sometimes terrible, owing to the north winds, which generally blow for twenty-four hours with great violence, but seldom last above three days. These winds sometimes bring numerous trees on the northern coast of Cuba, and neighbourhood of Havana, probably from the mouth of the Mississippi. Our author measured one, which was more than one hundred and twenty feet in length, and the diameter such, that though level with the ground, he could not mount it, except at the smaller end. Near Vera Cruz, the whole coast is covered with these trees, some of them deeply buried in the sand. Theory might infer that, in the course of ages, these
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trees will become coal, which is generally accompanied with sand- CUBA.
stone, and may thus be found in spots at a great distance from the na-
tive soil of the trees.*

• The frequency and predominance of the north winds in the gulf of Mexico, seem to over-
throw the system of Volney concerning the origin of the south-west winds of America. It may
however be found, that the rarification of the air by the trade winds, in the southern part of the
gulf, may occasion the influx from the north.

SAINT DOMINGO.

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MINGO.

THIS island, the second in the American archipelago, is now chiefly possessed by the revolted negroes, who ridiculously style it the empire of Hayti, its original name. It is about 400 B. miles in length by 100 in breadth. Under the name of Hispaniola, it was the first Spanish settlement in the New World. The French colony derived its origin from a party of Buccaneers, mostly natives of Normandy, towards the middle of the seventeenth century; and the western part was formally ceded to France by the peace of Ryswick. So industrious and flourishing was this French colony, that it was termed the paradise of the West Indies: and according to Mr. Edwards¹ in 1790, the population amounted to 30,831 whites, and about 480,000 negro slaves, the mulattoes, or free people of colour, being supposed to be 24,000; while the average exports before the revolution stood thus:

				Livres.
Clayed sugar	-	-	lbs. 58,642,214	41,049,549
Muscovado,	-	-	lbs. 86,549,829	34,619,931
Coffee,	-	-	lbs. 71,663,187	71,663,187
Cotton,	-	-	lbs. 6,698,858	12,397,716
Indigo,	-	-	hhds. 951,607	8,564,463
Molasses,	-	-	hhds. 23,061	2,767,320
An inferior sort of rum called taffia,			hhds. 2,600	312,000
Raw hides,	-	-	No. 6,500	52,000
Tanned ditto,	-	-	No. 7,900	118,500

The total value at the ports of shipping in

livres of St. Domingo, was - - 171,544,666

being equal to 4,765,129l. sterling money of Great Britain.

The national assembly of France, unhappily consisting of philosophers and not of men of business, passed some contradictory decrees concerning the rights of the mulattoes, or, as they are affectedly styled, people of colour, to vote for representatives. The smallest ray of political prudence might have informed them that the government of distant colonies ought not to have suffered the least alteration, till years after

¹ History of St. Domingo, 1797, 4to. p. 134. Reprinted in the third volume of his West Indies, 1801, 4to.

that

that of the parent country were established on a solid and lasting basis. After many absurd struggles between the whites and mulattoes, on the 21st June 1793 three thousand negro slaves, supported by the mulattoes, entered the capital city of Cape François, and perpetrated an universal massacre of the white men, women, and children. The abolition of slavery by the infatuated commissioners, in order to defend the island against the English, has had the effect that might have been foreseen, the colony having been lost, at least for a season, to European civilization and culture. The very nature and existence of the negroes, and other savages, being akin to that of other ferocious animals, and their chief pleasure to destroy, it would be in vain to expect any thing short of desolation from a negro colony; and the example being dangerous to our own possessions, a powerful fleet sailed from France, with our concurrence, in order to repeat the subjugation of this island, which will probably be found far more difficult than the first conquest. Amidst the effervescence of zeal without knowledge, this may be a lasting beacon to legislators to study the real practical business of life, and the irradicable difference of character and dispositions in the various races of men, to which infinite wisdom has allotted distinct portions of the earth; lest a negro should repay the philosopher's benefits by planting a dagger in his breast, with the favourite phrase of "am I not a man and a brother?"*

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* See vol. iii. of Edwards's History of the West Indies, in which, from this shocking example, he justly declares against the "monstrous folly" of sudden emancipation. "The Caribs of St. Vincent, and the Maroon negroes of Jamaica, were originally enslaved Africans, and *what they now are*, the freed negroes of St. Domingo *will hereafter be*—savages in the midst of society; without peace, security, agriculture, or property; ignorant of the duties of life, and unacquainted with all the soft and endearing relations which render it desirable; averse to labour, though frequently perishing of want; suspicious of each other, and towards the rest of mankind revengeful and faithless, remorseless and bloody-minded; pretending to be free, while groaning beneath the capricious despotism of their chiefs, and feeling all the miseries of servitude, without the benefits of subordination!" In our ill-advised expedition against St. Domingo, Hompesch's regiment of hussars was reduced, in little more than two months, from one thousand to three hundred, and the 96th regiment perished to a man. About the end of 1797, of fifteen thousand British and foreign troops, not more than three thousand were left alive, and fit for service; the loss of seamen being computed at five thousand; and the expenditure was five or six millions. *ib.* 385, 386. This is recorded as a general lesson to European nations against any warfare in the West Indies, while at half the expence any one of them might be in possession of the southern half of Africa. The ne-

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ST. DOMINGO.

An ample account of St. Domingo has been published by Monsieur Moreau de St. Mery.* The centre of the island is occupied by a group of high mountains called Cibao. From this group there rise three great chains; the longest stretching towards the east, and dividing that portion of the island. Another chain stretches to the north-west, ending at Cape Foux; while another, of less elevation, runs nearly in the same direction, and ends at Cape St. Mark. The number of mountains in the western part of the island renders the communication difficult between the northern and southern provinces.

The chief rivers are the Ozama on the south, the Yagua on the north, the Yuna on the east, and the Artibon on the west; but none is navigable above four leagues from its mouth.

There is a great number of *esters* or salt marshes, which render the climate unhealthy. The vegetable soil is in general of no great depth, but most of the hills admit cultivation. Towards the north and west the rocks are chiefly calcareous, and formed of madrepores. In other parts, according to Moreau, there are granites, porphyries, and jaspers of great beauty. Some of the waters contain a portion of sulphur; and there are two mineral springs which abound with the same substance.

The chains of mountains produce such varieties of climate, that the inhabitants are not agreed which seasons they shall denominate summer or winter. In the east and south the season of rains, from April to November, is called winter; while in the north, that season commences in August and ends in April, during which the northern winds blow and bring clouds and rain. In May, June, and July the heats are excessive. The tropical putrid fever, also called the yellow fever, was destructive to the French troops on the late expedition against the negroes. The

gro troops in St. Domingo offered to join the English, on condition of utterly cutting off all the mulattoes, *ib.* 389. Such are the virtues of savages! The negro chief of St. Domingo was a slave called Toussaint; and his army in 1797 was computed at 18,000 infantry and 1000 cavalry. He was opposed by the mulattoes, under Rigaud, to the amount of about 12,000. In October 1798 St. Domingo was abandoned by the British, who had been misled by designing foreigners; a distinguished feature, as Mr. Edwards remarks, in the conduct of the late war.

* The account of the Spanish part appeared at Philadelphia in 1796, two volumes octavo; and that of the French in 1797, two volumes quarto. An excellent map also appeared at Paris in 1803. See also a note of M. Walckenaer in the French translation of this geography, vi. 128.

beautiful town of Cape François has been burnt to the ground, and is ^{St. Domin-}_{go.} now a heap of ruins.

According to Moreau, the population of the French part of St. Domingo amounted to five hundred and twenty thousand; of which forty thousand were whites, twenty-eight thousand free men, and four hundred and fifty-two thousand slaves. The white inhabitants consist of two classes, the Europeans, and those born in the colony, commonly called creols. The slaves were all negroes either imported from Africa, or born in the colony; the latter being far more remarkable for industry and intelligence. The establishment of a negro kingdom, in a foreign climate, is a curious experiment in the history of man, but will probably rather lead to confusion and destruction than to order and industry. The example is certainly highly dangerous to the Spanish, British, and French colonies in the neighbourhood; but the climate is so adverse to Europeans that the conquest will be singularly difficult, as the negroes are more numerous, ferocious, far more skilful in war, and better provided with arms, than the original inhabitants.

The various races in St. Domingo, including the white and the black, amounted to eleven; which are all named and graduated by the author in a more ample and exact manner than that given by Blumenbach.*

The present state of the products of this important island remains obscure. The plantations of sugar and coffee must be greatly diminished, if not eradicated. The cacao or chocolate tree is a native; but the cocoa, which is sometimes confounded with it, belongs to the East Indies. The fruit of the former resembles a large bean, while the cocoa bears a nut of great size. In England both are used for breakfast; but Dr. Pinckard has justly observed, that the cacao is merely the husks of the chocolate, so that weak chocolate is a far superior beverage. The cocoa, on the contrary, is the solid part or kernel of the large nut, boiled and prepared, so as to form an excellent and nourishing decoction.

The celebrated wood called mahogany is also found in St. Domingo, though the best be that called the Spanish, from Cuba, but above all from the isthmus of Panama, where it is of superior excellence. It is

* De Varietate Generis Humani. Edit. 3. 1795. p. 142.

ST. DOMIN. the *Swietenia Mabagoni* of Linnæus, the *caoba* of the Spaniards; from
GO. which last term is probably derived the *acajou* of the French.*

* According to the last letters from St. Domingo, June 1806, the government is purely military, each village has a chief, and every inhabitant is obliged to provide himself with arms. There does not appear to be any established form of worship; a plurality of wives is admitted and encouraged. You are not to figure to yourself a set of wretched half-naked negroes; the black emperor, grand chamberlain of the black empire, prime ministers of interior and exterior relations, field marshals, chiefs of the legion of honour, and, in short, the whole of the *etat major de nou: eau four* (the new oven) are clothed in purple, scarlet, embroidery, and fine linen, all of American manufacture. The black empress, princesses, maids of honour, ladies of the legion of honour, officers' wives, and *filles de joie*, and, in fine, all persons of dignity, are arrayed in gorgeous apparel; and, like the majority of our modern dames of quality, they neither toil nor spin.

As the population cannot exceed eight hundred thousand, this imitation of the French empire shews the want of intelligence usual among negroes.

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J A M A I C A.

THIS island was discovered by Colon, 1494, during his second voyage; but was little explored till his fourth and last voyage, when he was unfortunately confined for many months on the north side of this isle, by the loss of his ships. The history of Jamaica under the Spanish power may be traced in the ample account of Mr. Edwards. In 1655 it fell into the hands of the English, by whose industry it has become one of the most flourishing of the West Indian settlements. In size it is the third island in this archipelago, being about 170 B. miles in length, by 60 in breadth. It is divided into three counties, Cornwall in the west, Middlesex in the centre, and Surry in the east. St. Jago or Spanish Town is regarded as the capital; while Kingston is the chief seaport. The number of negroes is computed at 250,000, and the whites are probably 20,000, the free negroes and mulattoes 10,000. The chief exports are to Great Britain, Ireland, and North America, in sugar, rum, coffee, indigo, ginger, and pimento, valued in 1787 at 2,000,000*l*. The intercourse with Honduras, and the Mosquito shore, may now be regarded as abandoned; but some little trade is carried on with Spanish America by small vessels, which elude the vigilance of the guarda costas. The imports were computed at a million and a half, and slaves from Africa formed a considerable article.* There is a poll tax, with duties on negroes and rum, yielding more than 100,000*l*. annually; and the ordinary expences of government in 1788 were computed at 75,000*l*. The legislature consists of the captain-general or governor; council of twelve, nominated by the crown; and a house of assembly, containing forty-three members, elected by the freeholders:† the three chief

* The maroon or runaway negroes have been sent to Nova Scotia. The term *maroon* seems to be from the Spanish *Simaran*, said to signify an ape; Edwards, iii. 304: but more probably from *simá*, a mountain or dale, to which they retreat. *Simarron* is however a general term for wild, thus *tobacco simarron* is wild tobacco, in Estalla and other writers.

† Edwards, i. 214.

JAMAICA.

towns, St. Jago, Kingston, and Port Royal, returning three members, the other parishes two. The principal towns are within a short distance of each other, Spanish Town being inland; while Kingston is on the north side, and Port Royal on the west, of a considerable bay; the last being greatly reduced by earthquakes and other calamities. The climate, though tempered by the sea breezes, is extremely hot; and the days and nights nearly of equal duration. A ridge of mountains, from east to west, divides the island into two parts; and the landscape often boasts of peculiar beauties. In the north the soil is generally a chalky marl, producing a close and clean turf, like an English lawn of the brightest verdure.* Towards the interior are forests, crowned by the blue summits of the central ridge. What is called the Blue Mountain Peak rises 7431 feet above the level of the sea: and the precipices are interspersed with beautiful savannas. There are about one hundred rivulets, of which the Black River, running to the south, is the most considerable. Some sulphureous and chalybeate springs likewise occur. It is said that the Spaniards worked mines of copper, if not silver; and one of lead has been recently discovered. One of the most remarkable natural curiosities seems to be what is called the vegetable fly, a singular fungus, also found in one of the French West India islands. It is said to abound on the summit of a high rock, in the shape of a hay-cock, but called the Dolphin's Head, near the town of Lucea, in that N. W. extremity of the isle called the parish of Hanover.[†] This rock rises suddenly from a flat country; and the negroes hesitate to climb the lofty precipice. A more important object is the bread-fruit tree, which, with other useful plants, has been introduced by the exertions of Sir Joseph Banks, than which none can be more beneficial, or more worthy of applause.[‡]

The British possessions in the West Indies being of great importance to the English reader, and complaints having been made of the brevity of the former description, some amplifications shall be here given from

* What is called the brick mould contains such a mixture of clay and sand as might be adapted to the kiln; but the name has no connexion with the colour, which is hazel. Edwards, ii. 205. This is the best soil for sugar canes next to the ashy loam of St. Christopher's; and is followed by the deep black mould of Barbadoes.

† From the information of a Jamaica planter.

‡ See Mr. Edwards's History of the West Indies, 2d edit. v. i. p. xxv.

the works of Mr. Edwards and other able writers on the subject. For JAMAICA.
the sake of greater authenticity their own words shall generally be preserved, as the author, instead of concealing, wishes to acknowledge and display the sources of his intelligence.

"Jamaica is situated in the Atlantic ocean, in about $18^{\circ} 12'$ north latitude, and in longitude about $77^{\circ} 45'$ west from London. From these data the geographical reader will perceive that the climate, although tempered and greatly mitigated by various causes, some of which will be presently explained, is extremely hot, with little variation from January to December; that the days and nights are nearly of equal duration; there being little more than two hours difference between the longest day and the shortest; that there is very little twilight; and finally, that when it is twelve o'clock at noon in London, it is about seven in the morning of Jamaica.

"The general appearance of the country differs greatly from most parts of Europe; yet the north and south sides of the island, which are separated by a vast chain of mountains extending from east to west, differ at the same time widely from each other. When Columbus first discovered Jamaica, he approached it on the northern side; and beholding that part of the country which now constitutes the parish of St. Anne, he was filled with delight and admiration at the novelty, variety, and beauty of the prospect. The whole of the scenery is indeed superlatively fine, nor can words alone (at least any that I can select) convey a just idea of it. A few leading particulars I may perhaps be able to point out, but their combinations and features are infinitely various, and to be enjoyed must be seen.

"The country at a small distance from the shore rises into hills, which are more remarkable for beauty than boldness; being all of gentle acclivity, and commonly separated from each other by spacious vales and romantic inequalities; but they are seldom craggy, nor is the transition from the hills to the vallies oftentimes abrupt. In general, the hand of nature has rounded every hill towards the top with singular felicity. The most striking circumstances, however, attending these beautiful swells are the happy disposition of the groves of pimento, with which most of them are spontaneously clothed, and the consummate verdure

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ture of the turf underneath, which is discoverable in a thousand openings; presenting a charming contrast to the deeper tints of the pimento. As this tree, which is no less remarkable for fragrant beauty, suffers no rival plant to flourish within its shade, these groves are not only clear of underwood, but even the grass beneath is seldom luxuriant. The soil in general being a chalky marl, which produces a close and clean turf, as smooth and even as the finest English lawn, and in colour infinitely brighter. Over this beautiful surface the pimento spreads itself in various compartments. In one place, we behold extensive groves; in another, a number of beautiful groups, some of which crown the hills, while others are scattered down the declivities. To enliven the scene, and add perfection to beauty, the bounty of nature has copiously watered the whole district. No part of the West Indies, that I have seen, abounds with so many delicious streams. Every valley has its rivulet, and every hill its cascade. In one point of view, where the rocks overhang the ocean, no less than eight transparent waterfalls are beheld in the same moment. These only who have been long at sea, can judge of the emotion which is felt by the thirsty voyager at so enchanting a prospect.

"Such is the foreground of the picture. As the land rises towards the centre of the island, the eye passing over the beauties that I have recounted, is attracted by a boundless amphitheatre of wood,

Insufferable height of loftiest shade,
Cedar; and branching palm.

MILTON.

An immensity of forest; the outline of which melts into the distant blue hills, and these again are lost in the clouds.

"On the southern side of the island, the scenery, as I have before observed, is of a different nature. In the landscape I have described, the prevailing characteristics are variety and beauty: in that which remains, the predominant features are grandeur and sublimity. When I first approached this side of the island by sea, and beheld from afar, such of the stupendous and soaring ridges of the Blue Mountains, as the clouds here and there disclosed, the imagination (forming an indistinct but awful idea of what was concealed, by what was thus partially displayed)

was

was filled with admiration and wonder. Yet the sensation which I felt JAMAICA. was allied rather to terror than delight. Though the prospect before me was in the highest degree magnificent, it seemed a scene of magnificent desolation. The abrupt precipice, and inaccessible cliff, had more the aspect of a chaos than a creation; or rather seemed to exhibit the effects of some dreadful convulsion, which had laid nature in ruins. Appearances, however, improved as we approached; for, amidst ten thousand bold features, too hard to be softened by culture, many a spot was soon discovered where the hand of industry had awakened life and fertility. With these pleasing intermixtures, the flowing line of the lower range of mountains (which now began to be visible, crowned with woods of majestic growth) combined to soften and relieve the rude solemnity of the loftier eminences; until at length the savannas at the bottom met the sight. These are vast plains, clothed chiefly with extensive cane-fields; displaying, in all the pride of cultivation, the verdure of spring, blended with the exuberance of autumn, and they are bounded only by the ocean; on whose bosom a new and ever-moving picture strikes the eye; for innumerable vessels are discovered in various directions, some crowding into, and others bearing away from, the bays and harbours with which the coast is every where indented. Such a prospect of human ingenuity and industry, employed in exchanging the superfluity of the Old World, for the productions of the New, opens another, and, I might add, an almost untrodden field, for contemplation and reflection.

" Thus the mountains of the West Indies, if not, in themselves, objects of perfect beauty, contribute greatly towards the beauty of general nature; and surely the inhabitants cannot reflect but with the deepest sense of gratitude to Divine Providence, on the variety of climate, so conducive to health, serenity, and pleasure, which these elevated regions afford them. On this subject I speak from actual experience. In a maritime situation, on the sultry plains of the south side, near the town of Kingston, where I chiefly resided during the space of fourteen years, the general medium of heat during the hottest months (from June to November, both inclusive), was eighty degrees on Fahrenheit's thermometer. At a villa eight miles distant, in the high lands of Liguanea,

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the thermometer seldom rose, in the hottest part of the day, above seventy. Here then was a difference of ten degrees in eight miles; and in the morning and evening the difference was much greater. At Cold Spring, the seat of Mr. Wallen, a very high situation six miles further in the country, possessed by a gentleman who has taste to relish its beauties and improve its productions, the general state of the thermometer is from 55° to 65° . It has been observed so low as 44° ; so that a fire there, even at noon-day, is not only comfortable, but necessary, a great part of the year. It may be supposed, that the sudden transition from the hot atmosphere of the plains, to the chill air of the higher regions, is commonly productive of mischievous effects on the human frame; but this, I believe, is seldom the case, if the traveller, as prudence dictates, sets off at the dawn of the morning (when the pores of the skin are in some measure shut), and is clothed somewhat warmer than usual. With these precautions, excursions into the uplands are always found safe, salubrious, and delightful. I will observe too, in the words of an agreeable writer, that 'on the tops of high mountains, where the air is pure and refined, and where there is not that immense weight of gross vapours pressing upon the body, the mind acts with greater freedom, and all the functions, both of soul and body, are performed in a superior manner.' I wish I could add, with the same author, that 'the mind at the same time leaves all low and vulgar sentiments behind it, and in approaching the ethereal regions, shakes off its earthly affections, and acquires something of celestial purity!'

"To these inequalities of its surface, however, it is owing that although the soil, in many parts of this island, is deep and very fertile, yet the quantity of rich productive land is but small in proportion to the whole. The generality of what has been cultivated is of a middling quality, and requires labour and manure to make it yield liberally. In fine, with every prejudice in its favour, if we compare Jamaica with many other islands of nearly the same extent (with Sicily, for instance, to which it was compared by Columbus), it must be pronounced an unfruitful and laborious country, as the following detail will demonstrate:—

"Jamaica

" Jamaica is one hundred and fifty miles in length, and, on a medium of three measurements at different places, about forty miles in breadth. These data, supposing the island to have been a level country, would give - - - - - 3,840,000 Acres.

" But a great part consisting of high mountains, the superficies of which comprise far more land than the base alone, it has been thought a moderate estimate to allow on that account $\frac{1}{8}$ more, which is - - - - - 240,000

The total is 4,080,000 Acres.

" Of these, it is found by a return of the clerk of the patents, that no more than 1,907,589 were, in November 1789, located, or taken up, by grants from the crown, and as no grants have been issued since that time, it appears that upwards of one half the country is considered as of no kind of value. The lands in cultivation may be distributed nearly as follows:

" In sugar plantations (including the land reserved in woods, for the purpose of supplying timber and fire-wood, or appropriated for common pasturage, all which is commonly two-thirds of each plantation) the number of acres may be stated at 690,000; it appearing that the precise number of those estates, in December 1791, was 767, and an allowance of 900 acres to each, on an average of the whole, must be deemed sufficiently liberal.

" Of breeding and grazing farms (or, as they are commonly called in the island, pens) the number is about 1,000; to each of which I would allow 700 acres, which gives 700,000; and no person who has carefully inspected the country will allow to all the minor productions, as cotton, coffee, pimento and ginger, &c. including even the provision plantations, more than half the quantity I have assigned to the pens. The result of the whole is 1,740,000 acres, leaving upwards of two millions an unimproved, unproductive wilderness, of which not more than one-fourth part is, I imagine, fit for any kind of profitable cultivation, great part of the interior country being both impracticable and inaccessible.

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" But, notwithstanding that so great a part of this island is wholly unimproveable, yet (such is the powerful influence of great heat and continual moisture) the mountains are in general covered with extensive woods, containing excellent timbers, some of which are of prodigious growth and solidity; such as the *lignum-vitæ*, dog-wood, iron-wood, pigeon-wood, green-heart, braziletto, and bully-trees, most of which are so compact and heavy as to sink in water. Some of these are necessary in mill work, and would be highly valuable in the Windward Islands. They are even so in such parts of Jamaica as, having been long cultivated, are nearly cleared of contiguous woods; but it frequently happens, in the interior parts, that the new settler finds the abundance of them an incumbrance instead of a benefit, and having provided himself with a sufficiency for immediate use, he sets fire to the rest, in order to clear his lands, it not answering the expence of conveying them to the sea-coast for the purpose of sending them to a distant market. Of softer kinds, for boards and shingles, the species are innumerable; and there are many beautiful varieties adapted for cabinet-work, among others the bread-nut, the wild-lemon, and the well-known mahogany.

" As the country is thus abundantly wooded, so, on the whole, we may assert it to be well watered. There are reckoned throughout its extent above one hundred rivers, which take their rise in the mountains, and run, commonly with great rapidity, to the sea, on both sides of the island. None of them are deep enough to be navigated by marine vessels. Black River, in St. Elizabeth's parish, flowing chiefly through a level country, is the deepest and gentlest, and admits flat-bottomed boats and canoes for about thirty miles.

" Of the springs, which very generally abound, even in the highest mountains, some are medicinal, and are said to be highly efficacious in disorders peculiar to the climate. The most remarkable of these is found in the eastern parish of St. Thomas, and the fame of it has created a village in its neighbourhood, which is called the Bath. The water flows out of a rocky mountain, about a mile distant, and is too hot to admit a hand being held underneath: a thermometer on Farenheit's

scale being immersed in a glass of this water, the quicksilver immediately arose to 123°. It is sulphureous, and has been used with great advantage in that dreadful disease of the climate called the dry-belly-ach. There are other springs, both sulphureous and chalybeate, in different parts of the country; of which, however, the properties are but little known to the inhabitants in general.

"In many parts of Jamaica there is a great appearance of metals; and it is asserted by Blome, and other early writers, that the Spanish inhabitants had mines both of silver and copper. I believe the fact; but the industry of the present possessors is perhaps more profitably exerted on the surface of the earth, than by digging into its bowels. A lead mine was indeed opened some years ago, near to the Hope estate, in the parish of St. Andrew, and it is said there was no want of ore, but the high price of labour, or other causes with which I am unacquainted, compelled the proprietors to relinquish their project.

"Of the most important of the present natural productions, as sugar, indigo, coffee, and cotton, I shall have occasion to treat at large, when the course of my work shall bring me to the subject of agriculture. It only remains, therefore, at present, to subjoin a few observations on the vegetable classes of inferior order; I mean those which, though not of equal commercial importance with the preceding ones, are equally necessary to the comfort and subsistence of the inhabitants. If the reader is inclined to botanical researches, he is referred to the voluminous collections of Sloane and Browne.

"The several species of grain cultivated in this island are, 1st, Maiz or Indian corn, which commonly produces two crops in the year, and sometimes three: it may be planted at any time when there is rain, and it yields according to the soil from fifteen to forty bushels the acre. 2dly, Guinea corn, which produces but one crop in the year: it is planted in the month of September, and gathered in January following, yielding from thirty to sixty bushels an acre. 3dly, Various kinds of calavances, a species of pea: and lastly, rice, but in no great quantity, the situation proper for its growth being deemed unhealthy, and the labour of negroes is commonly employed in the cultivation of articles that yield greater profit.

"This

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" This island abounds likewise with different kinds of grafs, both native and extraneous, of excellent quality; of the first is made exceeding good hay, but not in great abundance, this method of husbandry being practised only in a few parts of the country; and it is the less necessary, as the inhabitants are happily accommodated with two different kinds of artificial grafs, both extremely valuable, and yielding great profusion of food for cattle. The first is an aquatic plant called Scot's grafs, which though generally supposed to be an exotic, I have reason to think grows spontaneously in most of the swamps and morasses of the West Indies. It rises to five or six feet in height, with long succulent joints, and is of very quick vegetation. From a single acre of this plant, five horses may be maintained a whole year, allowing fifty-six pounds of grafs a-day to each.

" The other kind, called Guinea-grafs, may be considered as next to the sugar cane, in point of importance, as most of the grazing and breeding farms, or pens, throughout the island, were originally created, and are still supported chiefly by means of this invaluable herbage. Hence the plenty of horned cattle, both for the butcher and planter, is such, that few markets in Europe furnish beef at a cheaper rate, or of better quality, than those of Jamaica. Perhaps the settlement of most of the north-side parishes is wholly owing to the introduction of this excellent grafs, which happened by accident about fifty years ago, the seeds having been brought from the coast of Guinea, as food for some birds which were presented to Mr. Ellis, chief-justice of the island. Fortunately the birds did not live to consume the whole stock, and the remainder, being carelessly thrown into a fence, grew and flourished. It was not long before the eagerness displayed by the cattle to reach the grafs attracted Mr. Ellis's notice, and induced him to collect and propagate the seeds, which now thrive in some of the most rocky parts of the island, bestowing verdure and fertility on lands which otherwise would not be worth cultivation.

" The several kinds of kitchen-garden produce, as edible roots and pulse, which are known in Europe, thrive also in the mountains of this island; and the markets of Kingston and Spanish-Town are supplied with cabbages, lettuce, carrots, turnips, parsnips, artichokes, kidney-

beans, green peas, asparagus, and various sorts of European herbs, in JAMAICA. the utmost abundance. Some of them (as the three first) are I think of superior flavour to the same kinds produced in England. To my own taste, however, several of the native growths, especially the chocho, ochra, Lima-bean, and Indian-kale, are more agreeable than any of the esculent vegetables of Europe. The other indigenous productions of this class are plantains, bananas, yams of several varieties, calaloe (a species of spinnage), eddoes, cassavi, and sweet potatoes. A mixture of these stewed with salted fish or salted meat of any kind, and highly seasoned with Cayenne-pepper, is a favourite olio among the negroes. For bread, an unripe roasted plantain is an excellent substitute, and universally preferred to it by the negroes, and most of the native whites. It may in truth be called the staff of life to the former, many thousand acres being cultivated in different parts of the country for their daily support.

"Of the more elegant fruits, the variety is equalled only by their excellence. Perhaps no country on earth affords so magnificent a desert; and I conceive that the following were spontaneously bestowed on the island by the bounty of nature:—the annana or pine-apple, tamarind, papaw, guava, sweet-sop of two species, cashew-apple, custard-apple (a species of chirimoya), cocoa-nut, star-apple, grenadilla, avocado-pear, hog-plum and its varieties, pindal-nut, nesbury, mammec, mammee-sapota, Spanish-gooseberry, prickly pear, and perhaps a few others. For the orange, Seville and China, the lemon, lime, shaddock, and its numerous species, the vine, melon, fig and pomegranate, the West Indian islands were probably indebted to their Spanish invaders. Excepting the peach, the strawberry, and a few of the growth of European orchards (which however attain to no great perfection, unless in the highest mountains), the rose-apple, genip, and some others of no great value, I do not believe that English industry had added much to the catalogue, until within the last twenty years. About the year 1773, a botanic garden was established under the sanction of the Assembly, but it was not until the year 1782 that it could justly boast of many valuable exotics. At that period, the fortune of war having thrown into the possession of Lord Rodney a French ship bound from the island of Bourbon

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Bourbon to Cape François in St. Domingo, which was found to have on board some plants of the genuine cinnamon, the mango, and other oriental productions, his Lordship, from that generous partiality which he always manifested for Jamaica and its inhabitants, presented the plants to his favourite island;—thus nobly ornamenting and enriching the country his valour had protected from conquest. Happily, the present was not ill bestowed. The cinnamon may now be said to be naturalized to the country: several persons are establishing plantations of it, and one gentleman has set out fifty thousand plants. The mango is become almost as common as the orange; but, for want of attention, runs into a thousand seminal varieties. Some of them, to my taste, are perfectly delicious.*

"The island of Jamaica is divided into three counties, which are named Middlesex, Surry, and Cornwall. The county of Middlesex is composed of eight parishes, one town, and thirteen villages. The town is that of St. Jago-de-la-Vega or Spanish Town, the capital of the island. Most of the villages of this and the other counties, are hamlets of no great account, situated at the different harbours and shipping-places, and supported by the traffic carried on there. St. Jago-de-la-Vega is situated on the banks of the river Cobre, about six miles from the sea, and contains between five and six hundred houses, and about five thousand inhabitants, including free people of colour. It is the residence of the governor or commander in chief, who is accommodated with a superb palace; and it is here that the legislature is convened, and the Court of Chancery, and the Supreme Court of Judicature, are held.

"The county of Surry contains seven parishes, two towns, and eight villages. The towns are those of Kingston and Port Royal; the former of which is situated on the north side of a beautiful harbour, and was founded in 1693, when repeated desolations by earthquake and fire had driven the inhabitants from Port Royal. It contained in 1788 one thousand six hundred and sixty-five houses, besides negro-huts and warehouses. The number of white inhabitants, in the same year, was six thousand five hundred and thirty-nine: of free people of colour three thousand two hundred and eighty: of slaves sixteen thousand six hun-

* Edwards's History of the West Indies, 1801, 3 vols. Vol. i. p. 237—257.

dred and fifty-nine:—total number of inhabitants, of all complexions JAMAICA.
and conditions, twenty-six thousand four hundred and seventy-eight. It is a place of great trade and opulence. Many of the houses in the upper part of the town are extremely magnificent; and the markets for butchers' meat, turtle, fish, poultry, fruits, and vegetables, &c. are inferior to none. I can add too, from the information of a learned and ingenious friend, who kept comparative registers of mortality, that since the surrounding country is become cleared of wood, this town is found to be as healthful as any in Europe.

"Port Royal, once a place of the greatest wealth and importance in the West Indies, is now reduced by repeated calamities to three streets, a few lanes, and about two hundred houses. It contains, however, the royal navy yard, for heaving down and refitting the king's ships; the navy hospital, and barracks for a regiment of soldiers. The fortifications are kept in excellent order, and vie in strength, as I am told, with any fortrefs in the king's dominions.

"Cornwall contains five parishes, three towns, and six villages.—The towns are Savanna-la-Mar on the south side of the island, and Montego Bay and Falmouth on the north. The former was destroyed by a dreadful hurricane and inundation of the sea, in 1780, as I have elsewhere related. It is now partly rebuilt, and may contain from sixty to seventy houses.

"Montego Bay is a flourishing and opulent town: consisting of two hundred and twenty-five houses, thirty-three of which are capital stores or warehouses. The number of top-sail vessels which clear annually at this port are about one hundred and fifty, of which seventy are capital ships; but in this account are included part of those which enter at Kingston.

"Falmouth, or (as it is more commonly called) the Point, is situated on the south side of Martha-Brae harbour, and, including the adjoining villages of Martha-Brae and the Rock, is composed of two hundred and twenty houses. The rapid increase of this town and neighbourhood within the last sixteen years is astonishing. In 1771, the three villages of Martha-Brae, Falmouth, and the Rock, contained together but eighteen houses; and the vessels which entered annually at the port of

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Falmouth did not exceed ten. At present it can boast of upwards of thirty capital stationed ships, which load for Great Britain, exclusive of sloops and smaller craft.

" Each parish (or precinct, consisting of an union of two or more parishes,) is governed by a chief magistrate, styled *Custos Rotulorum*, and a body of justices, unlimited by law as to number, by whom sessions of the peace are held every three months, and courts of common pleas to try actions arising within the parish or precinct, to an amount not exceeding twenty pounds. In matters of debt not exceeding forty shillings, a single justice is authorized to determine.

" The whole twenty parishes contain eighteen churches and chapels, and each parish is provided with a rector, and other church officers; the rectors' livings, the presentation to which rests with the governor or commander in chief, are severally as follows: viz. St. Catherine 300*l. per annum*; Kingston, St. Thomas in the East, Clarendon, and Westmoreland, 250*l. per annum*; St. David, St. George, and Portland, 100*l. per annum*; all the rest 200*l. per annum*. These sums are paid in lieu of tythes by the churchwardens of the several parishes respectively, from the amount of taxes levied by the vestries on the inhabitants.

" Each parish builds and repairs a parsonage house, or allows the rector 50*l. per annum* in lieu of one; besides which, many of the livings have glebe lands of very considerable value annexed to them, as the parish of St. Andrew, which altogether is valued at one thousand pounds sterling *per annum*. The bishop of London is said to claim this island as part of his diocese, but his jurisdiction is renounced and barred by the laws of the country; and the governor or commander in chief, as supreme head of the provincial church, not only inducts into the several rectories, on the requisite testimonials being produced that the candidate has been admitted into priest's orders according to the canons of the church of England, but he is likewise vested with the power of suspending a clergyman of lewd and disorderly life *ab officio*, upon application from his parishioners. A suspension *ab officio* is in fact a suspension a *beneficio*, no minister being entitled to his stipend for any longer time than he shall actually officiate, unless prevented by sickness.

" The vestries are composed of the custos, and two other magistrates; JAMAICA. the rector and ten vestrymen; the latter are elected annually by the freeholders. Besides their power of assessing and appropriating taxes, they appoint way-wardens, and allot labourers for the repair of the public highways. They likewise nominate constables, for the collection both of the public and parochial taxes.

" The supreme court of judicature for the whole island, (commonly called the Grand Court, as possessing similar jurisdiction in this country to that of the several courts of King's Bench, Common Pleas, and Exchequer, in Great Britain,) is held in the town of St. Jago-de-la-Vega, the capital of the county of Middlesex, on the last Tuesday of each of the months of February, May, August, and November, in every year. In this court, the chief justice of the island presides, whose salary is only 120*l.*, but the perquisites arising from the office make it worth about 3,000*l. per annum.* The assistant judges are gentlemen of the island, commonly planters, who receive neither salary nor reward of any kind for their attendance. Three judges must be present to constitute a court; and each term is limited in duration to three weeks. From this court, if the matter in dispute in a civil action be for a sum of 300*l.* sterling, or upwards, an appeal lies to the governor and council, as a court of error; if sentence of death be passed for felony, the appeal is to the governor alone.

" Assize courts also are held every three months, in Kingston for the county of Surry, and in Savanna-la-Mar for the county of Cornwall. The Surry court begins the last Tuesday in January, April, July, and October. The Cornwall court begins the last Tuesday in March, June, September, and December; each assize court is limited to a fortnight in duration. Thus have the inhabitants law courts every month of the year, besides the courts of chancery, ordinary, admiralty, and the several parish courts. The judges of the assize courts act without salary or reward, as well as the assistant judges of the supreme court, any one of whom, if present, presides in the assize court. No appeal from the latter to the former is allowed, but judgments of the assize immediately following the supreme court, are considered as of one and the same

JAMAICA: court, and have an equal right in point of priority, with those obtained in the grand court.

" In this island, as in Barbadoes, the departments of council and attorney are distinct; and, although in the island last-mentioned, barristers have been admitted by licence from the governor, it is otherwise in Jamaica; the colonial laws expressly requiring, that no person shall be allowed to practise who has not been regularly admitted in the courts of England, Ireland, or Scotland; or else, (in the case of an attorney) who has not served as articulated clerk to some sworn attorney or solicitor in the island for five years at least.

" The governor, or commander in chief, is chancellor by his office, and presides solely in that high department, which is administered with great form and solemnity. He is also the sole ordinary for the probate of wills, and granting letters of administration. From the first of these offices, he derives extensive authority, and from the latter considerable emolument.

" As appendages of the supreme court, the several great offices: viz. the office of enrollments, or secretary of the island, provost-marshal-general, clerk of the court, or prothonotary, custos-brevium, &c. are held and situated in Spanish town. The first is an office of record, in which the laws passed by the legislature are preserved; and copies of them entered into fair volumes. In this office all deeds, wills, sales, and patents, must be registered. It is likewise required that all persons, (after six weeks residence) intending to depart this island, do affix their names in this office, twenty-one days before they are entitled to receive a ticket or let-pass, to enable them to leave the country. In order to enforce this regulation, masters of vessels are obliged, at the time of entry, to give security in the sum of 1,000*l.* not to carry off the island any person without such ticket or let-pass. Trustees, attornies, and guardians of orphans, are required to record annually in this office accounts of the produce of estates in their charge; and, by a late act, mortgagees in possession are obliged to register, not only accounts of the crops of each year, but also annual accounts current of their receipts and payments. Transcripts of deeds, &c. from the office, properly certified, are evidences

dences in any court of law, and all deeds must be enrolled within three months after date, or they are declared to be void as against any other deed proved and registered within the time limited; but if no second deed is on record, then the same are valid, though registered after the three months. It is presumed that the profits of this office, which is held by patent from the crown, and exercised by deputation, exceed 6,000*l.* sterling *per annum*.

"The provost-marshal-general is an officer of high rank and great authority.—The name denotes a military origin, and the office was first instituted in this island in 1660, by royal commission, to Sir Thomas Lynch. It is now held by patent from the crown, which is usually granted for two lives, and the patentee is permitted to act by deputy, who is commonly the highest bidder. The powers and authorities annexed to this office are various: and the acting officer is high-sheriff of the whole island during his continuance in office, and permitted to nominate deputies under him for every parish or precinct. His legal receipts have been known to exceed 7,000*l.* sterling *per annum*, and it is supposed that some of his deputies make nearly as much.

"The office of clerk of the supreme court is likewise held by patent, and exercised by deputation. Evidence was given to the house of assembly some years ago, that its annual value at that time exceeded 9,000*l.* currency. Of late, I believe, it is considerably diminished.

"Of the other great lucrative offices, the principal are those of the register in chancery, receiver-general, and treasurer of the island, naval officer, and collector of the customs for the port of Kingston. All these appointments, whether held by patent, or commission, are likewise supposed to afford considerable emolument to persons residing in Great Britain. It is computed, on the whole, that not less than 30,000*l.* sterling is remitted annually, by the deputies in office within the island, to their principals in the mother-country.

"The legislature of Jamaica is composed of the captain-general or commander in chief, of a council nominated by the crown, consisting of twelve gentlemen, and a house of assembly containing forty three members, who are elected by the freeholders: viz. three for the several towns and parishes of St. Jago-de-la-Vega, Kingston, and Port Royal, and

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and two for each of the other parishes. The qualification required in the elector, is a freehold of ten pounds *per annum* in the parish where the election is made; and in the representative, a landed freehold of three hundred pounds *per annum*, in any part of the island, or a personal estate of three thousand pounds. In the proceedings of the general assembly, they copy, as nearly as local circumstances will admit, the form of the legislature of Great Britain; and all their bills (those of a private nature excepted,) have the force of laws as soon as the governor's assent is obtained. The power of rejection, however, is still reserved in the crown; but until the royal disapprobation is signified, the laws are valid.

"Of the laws thus passed, the principal relate chiefly to regulations of local policy, to which the law of England is not applicable, as the slave system for instance. In this and other cases, the English laws being silent, the colonial legislature has made, and continues to make such provision therein, as the exigencies of the colony are supposed to require; and on some occasions, where the principle of the English law has been adopted, it has been found necessary to alter and modify its provisions, so as to adapt them to circumstances and situation. Thus, in the mode of setting out emblements, the practice of fine and recovery, the case of insolvent debtors, the repair of the public roads, the maintenance of the clergy, and the relief of the poor, very great deviations from the practice of the mother-country have been found indispensably requisite.

"The revenues of this island may be divided into two branches; the one perpetual, by an act of the year 1728, called the revenue law, of the origin of which I have already spoken, and of which revenues the quit-rents constitute a part; the other annual, by grants of the legislature. The revenue law may raise about 12,000*l.* *per annum*, of which 8,000*l.* is particularly appropriated, as I have elsewhere observed, and the surplus is applicable to the contingent expences of government in aid of the annual funds. The governor receives 2,500*l.* *per annum* out of the 8,000*l.* fund. A further salary of 2,500*l.* is settled upon him during his residence in the island by a special act of legislature, passed the beginning of his administration, and is made payable out of some

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one of the annual funds provided by the assembly. These at this time JAMAICA may amount to 70,000*l.* of which about 40,000*l.* is a provision for granting an additional pay to the officers and soldiers of his majesty's forces stationed for the protection of the island; every commissioned officer being entitled to 2*s.* per week, and every private to 5*s.* An allowance is also made to the wives and children of the soldiers; which, with the British pay, enables them to live much more comfortably than the king's troops generally do in Europe:

"The usual ways and means adopted for raising the above taxes are, first, a duty of 20*s.* per head on all negroes imported; secondly, a duty on all rum and other spirits retailed and consumed within the island; thirdly, the deficiency law: an act which was intended originally to oblige all proprietors of slaves to keep one white person for every thirty blacks; but the penalty, which is sometimes 13*l.*, at other times 26*l.* *per annum*, for each white person deficient of the number required, is become so productive a source of revenue, that the bill is now considered as one of the annual supply bills: fourthly, a poll-tax on all slaves, and stock, and a rate on rents and wheel carriages. Besides these, occasional tax-bills are passed by the legislature, as necessity may require.*"

The contingent expences for 1788 amounted to more than seventy-five thousand pounds. The militia is computed at eight thousand; the number of white inhabitants at twenty-five thousand, while the number of negroes is supposed to be three hundred thousand. The number of ships cleared from the port of Jamaica may annually amount to five hundred. The contraband trade with the Spanish dominions in America, has considerably declined, since the court of Madrid adopted more liberal measures with regard to the commerce of its colonies.

Nor in the account of Jamaica must some idea of the chief plantations, Sugar, those of sugar, be omitted; and the subject is so curious and important, that the details of our industrious author will readily be excused.

"The ancient name of the cane was *Saccharum*. This word was corrupted, in Monkish Latin, into *Zucharum*, and afterwards into *Zucra*. By the Spaniards it was converted into *Açucar*, from whence *Sugar*.

* Edwards's History of the West Indies, vol. i. p. 260.

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The plant is a native of the east, and was probably cultivated in India and Arabia from time immemorial. The sweet-cane is mentioned twice in the Old Testament, as an article of merchandise; and there is a passage in Dioscorides which seems to imply, that the art of granulating the juice by evaporation was practised in his time; for he describes sugar as having the appearance of salt, and of being brittle to the teeth, *Salis modo coactum est; dentibus ut sal fragile*. Lucan, enumerating the eastern luxuries of Pompey, describes a people who used the cane-juice as a common drink,

Quique bibunt tenerâ dulces ab arundine succos.

"Lasitau conjectures, however, that the plant itself was unknown in Christendom, until the time of the Crusades. Its cultivation, and the method of expressing and purifying the juice, as practised by the inhabitants of Acra and Tripoli, are described by Albertus Aquensis, a Monkish writer, who observes, that the Christian soldiers in the Holy Land frequently derived refreshment and support, in a scarcity of provisions, by sucking the canes. It flourished also in the Morea, and in the islands of Rhodes and Malta, and from thence was transported into Sicily; but the time is not precisely ascertained: Lasitau recites a donation of William, the second king of Sicily, to the monastery of St. Bennet, of a mill for grinding sugar-canes, with all its rights, members, and appurtenances. This happened in 1166.

"From Sicily, the Spaniards are said to have conveyed the cane to the Azores, Madeira, the Canary and Cape-de-Verd Islands, soon after they were discovered in the 15th century; and from some one of those islands it has been supposed to have found its way, at an early period, to Brasil and the West Indies; "producing a commerce (says Lasitau,) which has proved more valuable than the mines of Peru."

"Such is the commonly received opinion respecting the history of this valuable production. Herrera positively asserts, that the sugar-cane was transplanted into Hispaniola from the Canary Islands, in the year 1506, by a Spaniard of the name of Aguilon; but, in this instance, the respectable historian, however correct in general, is clearly mistaken; it appearing by the testimony of Peter Martyr, in the third book of his

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first Decad, written during Colon's second expedition, which began in JAMAICA, 1493, and ended in 1495, that the sugar cane was, at that period, sufficiently known in Hispaniola.

"The fact seems to have been, that Columbus himself carried it thither, among other articles and productions which he conveyed from Old Spain and the Canary Islands, in his second voyage. Martyr's account is in the note.* Although in this passage the sugar cane is not expressly enumerated, it is evident, that it was not considered by Columbus as a native of the country; for he could not possibly have been unacquainted with this production, which grew in great perfection in Valencia, and other parts of Spain; yet he found, it seems, on his arrival, no trees or plants in the newly-discovered country, of which he had any previous knowledge, excepting only the pine and the palm. That the cane was then there, appears from a subsequent passage; in which, speaking of such vegetable productions as the Spaniards had sown or planted in an inclosed garden immediately after their arrival, Martyr has these words, which, combined with the former, are, as I conceive, decisive of the question.†

"On the other hand, there are authors of great learning and industry, who maintain, that the sugar-cane is a native, both of the islands and the continent of America, within the tropics. They assert, that it was found growing spontaneously in many parts of the new hemisphere, when first explored by the Spanish invaders. P. Labat, who appears to have considered the question with a laborious attention, is decidedly of this opinion; and he quotes, in support of it, among other authorities,

* "Ad factus procreandos, equas, oves, juvenas, et plura alia cum sui generis masculis: ligumina, triticum, hordeum, et reliqua iis similis, non solum alimenti, verum etiam seminandi gratia, præfectus apparat: vites et aliarum nostrarum arborum plantaria, quibus terra illa caret ad eam important: nullus enim apud eas insulas notas arbores invenere præter pinus palmasque et eas altissimas, ac miræ duritiæ et proceritatis ac rectitudinis, propter soli ubertatem, atque etiam ignotos fructus alias plures procreantes. Terram autem esse terrarum omnium quas ambiunt sidera, uberissimam."

† "Melones cucurbitas, cucumeres et alia id genus, in diem sextum et trigessimum carpserunt. Sed nusquam se meliores unquam comedissee aiebant. Hæc hortensis, toto anno habent recentia. Cannarum radices ex quarum succo saccharum extorquetur, sed non coagulatur succus, cubitales cannas intra quindecim etiam diem emiserunt."

JAMAICA. that of Thomas Gage, an Englishman, who went to New Spain in 1625, and of whom I have had occasion to speak in a former part of this work. Gage's voyage is now before me, and it is certain that he enumerates sugar-canes among the fruits and provisions supplied to the crew of his ship by the Caribs of Guadaloupe. "Now," observes Labat, "it is a fact, that the Spaniards had never cultivated an inch of ground in the smaller Antilles. Their ships commonly touched at those islands indeed for wood and water, and they left swine in the view of supplying with fresh provisions such of their countrymen as might call there in future; but it were absurd in the highest degree to suppose, that they would plant sugar-canes, and put hogs ashore at the same time to destroy them.

"Neither had the Spaniards any motive for bestowing this plant on islands which they considered as of no kind of importance, except for the purpose that has been mentioned; and to suppose that the Caribs might have cultivated, after their departure, a production of which they knew nothing, betrays a total ignorance of the Indian disposition and character.

"But," continues Labat, "we have surer testimony, and such as proves, beyond all contradiction, that the sugar cane is the natural production of America. For, besides the evidence of Francis Ximenes, who, in a treatise on American plants, printed at Mexico,* asserts, that the sugar-cane grows without cultivation, and to an extraordinary size, on the banks of the river Plate, we are assured by Jean de Lery, a protestant minister, who was chaplain, 1556, to the French garrison in the fort of Coligny, on the river Janeiro, that he himself found sugar-canes in great abundance in many places on the banks of that river, and in situations never visited by the Portuguese. Father Hennepin, and other voyagers, bear testimony in like manner to the growth of the cane near the mouth of the Mississippi; and Jean de Laet to its spontaneous production in the island of St. Vincent. It is not for the plant itself, therefore, but for the secret of making sugar from it, that the West-Indies are indebted to the Spaniards and Portuguese; and these to the nations of the east."

* It is an extract of Fernand's, printed 1615.

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"Such is the reasoning of Labat, which the learned Lafitau has pronounced incontrovertible; and it is greatly strengthened by recent discoveries; the sugar-cane having been found in many of the islands of the Pacific Ocean, by our late illustrious navigator Captain Cook.

"In these accounts, however, there is no contradiction. The sugar-cane might have grown spontaneously in many parts of the New World; and Columbus, unapprised of the circumstance, might likewise have carried some of the plants to Hispaniola, and such I believe was the fact. But be this as it may, the industry with which the Spanish settlers applied themselves to its cultivation, affords a wonderful contrast to the manners of the present inhabitants, it appearing by the testimony of Oviedo, that no less than thirty ingenios, or sugar-mills, were established on that island so early as 1535.

"The botanical name of the sugar-cane is *Arundo saccharifera*. It is a jointed reed terminating in leaves or blades, whose edges are finely and sharply serrated. The body of the cane is strong, but brittle, and when ripe, of a fine straw colour, inclining to yellow; and it contains a soft pithy substance, which affords a copious supply of juice of a sweetness the least cloying, and the most agreeable in nature. The intermediate distance between each point of the cane varies according to the nature of the soil;—in general it is from one to three inches in length, and from half an inch to an inch in diameter. The length of the whole cane depends likewise upon circumstances. In strong lands, and lands richly manured, I have seen some that measured twelve feet from the stole to the upper joint. The general height however, (the flag part excluded,) is from three feet and a half to seven feet, and in very rich lands the stole or root has been known to put forth upwards of one hundred suckers or shoots.

"It may be supposed that a plant thus rank and succulent, requires a strong and deep soil to bring it to perfection, and, as far as my own observation has extended, I am of opinion, that no land can be too rich for that purpose.—When bad sugar is made from fat and fertile soils, properly situated, I am inclined to impute the blame rather to mismanagement in the manufacturer than to the land. The very best soil, however, that I have seen or heard of, for the production of sugar of the

JAMAICA. finest quality, and in the largest proportion, is the ashy loam of St. Christopher's, of which an account has been given in the history of that island. Next to that, is the soil which in Jamaica is called brick-mold; not as resembling a brick in colour, but as containing such a due mixture of clay and sand, as is supposed to render it well adapted for the use of the kiln. It is a deep, warm, and mellow hazel earth, easily worked; and though its surface soon grows dry after rain, the under stratum retains a considerable degree of moisture in the driest weather; with this advantage too, that even in the wettest season, it seldom requires trenching. Plant-canes in this soil (which are those of the first growth), have been known in very fine seasons to yield two tons and a half of sugar *per* acre. After this may be reckoned the black mold, of several varieties. The best is the deep black earth of Barbadoes, Antigua, and some other of the Windward islands; but there is a species of this mold in Jamaica that is but little, if any thing, inferior to it, which abounds with limestone and flint, on a substratum of soapy marl. Black mold on clay is more common, but as the mold is generally shallow, and the clay stiff and retentive of water, this last sort of land requires great labour, both in ploughing and trenching, to render it profitable. Properly pulverized and manured, it becomes very productive; and may be said to be inexhaustible. It were endless to attempt a minute description of all the other soils which are found in these islands. There is however a peculiar sort of land on the north side of Jamaica, chiefly in the parish of Trelawney, that cannot be passed over unnoticed, not only on account of its scarcity, but its value, few soils producing finer sugars, or such (I have been told by sugar refiners) as answer so well in the pan—an expression, signifying, as I understand it, a greater return of refined sugar than common. The land alluded to, is generally of a red colour; the shades of which however vary considerably, from a deep chocolate to a rich scarlet; in some places it approaches to a bright yellow, but it is every where remarkable, when first turned up, for a glossy or shining surface, and if wetted, stains the fingers like paint. I have selected specimens, which are hardly distinguishable by the eye or the touch, from the substance called gamboge. Earths of various shades of red and yellow, are found indeed in many other parts of the West Indies, but in none of them.

them are observed the same glossy appearance and cohesion as in the soil JAMAICA. in question, which appears to me to consist of a native earth, or pure loam, with a mixture of clay and sand. It is easily worked, and at the same time so tenacious, that a pond dug in this soil, in a proper situation, with no other bottom than its own natural texture, holds water like the stiffest clay. It is remarkable, however that the same degree of ploughing or pulverization, which is absolutely necessary to render stiff and clayey lands productive, is here not only unnecessary, but hurtful;—for though this soil is deep, it is at the same time far from being heavy, and is naturally dry. As, therefore, too much exposure to the scorching influence of a tropical sun, destroys its fertility, the system of husbandry on sugar plantations, in which this soil abounds, is to depend chiefly on what are called ratoon canes. Ratoons are the sprouts of suckers that spring from the roots, or stoles of the canes that have been previously cut for sugar, and are commonly ripe in twelve months.—Canes of the first growth, as hath been observed, are called plant-canecan. They are the immediate produce of the original plants or gems, placed in the ground, and require from fifteen to seventeen months to bring them to maturity. The first yearly returns from their roots, are called first ratoons; the second year's growth, second ratoons; and so on, according to their age. In most parts of the West Indies, it is usual to hole and plant a certain proportion of the cane land (commonly one-third) in annual succession. This, in the common mode of holing the ground by the hoe, is frequently attended with great and excessive labour to the negroes, which is saved altogether by the system we are treating of. By the latter method, the planter, instead of stocking up his ratoons, and holing and planting the land anew, suffers the stoles to continue in the ground, and contents himself, as his cane fields become thin and impoverished, by supplying the vacant spaces with fresh plants. By these means, and the aid of manure, the produce of sugar *per* acre, if not apparently equal to that from the best plant-canecan in other soils, gives perhaps in the long run, full as great returns to the owner; considering the relative proportion of the labour and expence attending the different systems. The common yielding of this land, on an average,

JAMAICA. rage, is seven hogheads of sixteen hundred weight to ten acres, which are cut annually.

" In the cultivation of other lands, (in Jamaica especially,) the plough has been introduced of late years, and in some few cases to great advantage; but it is not every soil, or situation, that will admit the use of the plough; some lands being much too stoney, and others too steep; and I am sorry I have occasion to remark, that a practice commonly prevails in Jamaica, on properties where this auxiliary is used, which would exhaust the finest lands in the world. It is that of ploughing, then cross ploughing, round ridging, and harrowing the same lands from year to year, or at least every other year, without affording manure; accordingly, it is found, that this method is utterly destructive of the ratoon, or second growth, and altogether ruinous. It is indeed astonishing, that any planter of common reading or observation, should be passive under so pernicious a system. Some gentlemen, however, of late manage better: their practice is to break up stiff and clayey land, by one or two ploughings, early in the spring, and give it a summer's fallow. In the autumn following, being then mellow, and more easily worked, it is holed and planted by manual labour, after the old method, which shall be presently described. But, in truth, the only advantageous system of ploughing in the West Indies, is to confine it to the simple operation of holing, which may certainly be performed with much greater facility and dispatch by the plough than by the hoe; and the relief which, in the case of stiff and dry soils, is thus given to the negroes, exceeds all estimation, in the mind of a humane and provident owner. On this subject I speak from practical knowledge. At a plantation of my own, the greatest part of the land, which is annually planted, is neatly and sufficiently laid into cane-holes, by the labour of one able man, three boys, and eight oxen, with the common single-wheeled plough. The ploughshare indeed is somewhat wider than usual, but this is the only difference, and the method of ploughing is the simplest possible.—By returning the plough back along the furrow, the turf is alternately thrown to the right and to the left, forming a trench seven inches deep, about two feet and a half wide at the top, and one foot wide at the bottom. A space of
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eighteen or twenty inches is left between each trench, on which the mold being thrown up by the share, the banks are properly formed, and the holing is complete. Thus the land is not exhausted by being too much exposed to the sun; and in this manner a field of twenty acres is holed with one plough, and with great ease, in thirteen days. The plants are afterwards placed in the trench as in the common method, which remains to be described.

"The usual mode of holing by manual labour is this:—The quantity of land intended to be planted, being cleared of weeds and other incumbrances, is divided into several plats of certain dimensions, commonly from fifteen to twenty acres each; the spaces between each plat or division, are left wide enough for roads, for the conveniency of carting. Each plat is then subdivided, by means of a line and wooden pegs, into small squares of about three feet and a half. Sometimes indeed the squares are a foot larger; but this circumstance makes but little difference. The negroes are then placed in a row in the first line, one negro to a square, and directed to dig out with their hoes the several squares, commonly to the depth of five or six inches. The mould which is dug up being formed into a bank at the lower side, the excavation or cane-hole, seldom exceeds fifteen inches in width at the bottom, and two feet and a half at the top. The negroes then fall back to the next line, and proceed as before. Thus the several squares between each line are formed into a trench of much the same dimensions with that which is made by the plough. An able negro will dig from sixty to eighty of these holes for his day's work of ten hours; but if the land has been previously ploughed and lain fallow, the same negro will dig nearly double the number in the same time.

"The cane-holes or trench, being now completed, whether by the plough or by the hoe, and the cuttings selected for planting, which are commonly the tops of the canes that have been ground for sugar (each cutting containing five or six joints,) two of them are sufficient for a cane-hole of the dimensions described. These being placed longitudinally in the bottom of the hole, are covered with mould about two inches deep; the rest of the bank being intended for future use. In twelve or fourteen days the young sprouts begin to appear, and, as soon

JAMAICA.

as they rise a few inches above the ground, they are, or ought to be, carefully cleared of weeds, and furnished with an addition of mould from the banks. This is usually performed by the hand. At the end of four or five months, the banks are wholly levelled, and the spaces between the rows carefully hoe-ploughed. Frequent cleanings, while the canes are young, are indeed so essentially necessary, that no merit in an overseer can compensate for the want of attention in this particular.—A careful manager will remove, at the same time, all the lateral shoots or suckers that spring up after the canes begin to joint, as they seldom come to maturity, and draw nourishment from the original plants.

“The properest season, generally speaking, for planting, is unquestionably in the interval between August and the beginning of November. By having the advantages of the autumnal seasons, the young canes become sufficiently luxuriant to shade the ground before the dry weather sets in. Thus the roots are kept cool, and the earth moist. By this means too, they are ripe for the mill in the beginning of the second year, so as to enable the overseer or manager to finish his crop, (except as to the few canes which are reserved to furnish cuttings or tops for planting,) by the latter end of May. Canes planted in and after November, lose the advantage of the autumnal rains; and it often happens, that dry weather in the beginning of the ensuing year retards their vegetation, until the vernal season, or May rains, set in, when they sprout both at the roots and the joints; so that by the time they are cut, the field is loaded with unripe suckers, instead of sugar-canes. A January plant, however, commonly turns out well; but canes planted very late in the spring, though they have the benefit of the May rains, seldom answer expectation; for they generally come in unseasonably, and throw the ensuing crops out of regular rotation. They are therefore frequently cut before they are ripe; or, if the autumnal season set in early, are cut in wet weather, which has probably occasioned them to spring afresh; in either case, the effect is the same: the juice is unconcocted, and all the sap being in motion, the root is deprived of its natural nourishment, to the great injury of the ratoon. The chief objection to a full plant is this, that the canes become rank and top heavy, at a period when violent rains and high winds are expected, and are therefore frequently lodged before

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before they are fit to cut. The observation, when applied to canes JAMAICA. planted in rich and new lands, is just; and on this account some gentlemen have introduced the following system:—they plant in August and September, clean the young sprouts, and give them mould occasionally, until the beginning of January, when they cut the young plants close to the ground with knives, and level the bank, spreading the remainder of the mould over the roots, which soon afterwards send out a number of vigorous and luxuriant shoots all of an equal growth. It is alleged, that by this means the cane is not too rank in the stormy months, and nevertheless comes to perfection in good time the succeeding spring.

“On the whole, it is a striking and just remark of Colonel Martin, that there is not a greater error in the system of planting, than to make sugar, or to plant canes, in improper seasons of the year; for by mismanagement of this kind every succeeding crop is put out of regular order. A plantation, he observes, ought to be considered as a well-constructed machine, compounded of various wheels turning different ways, yet all contributing to the great end proposed; but if any one part runs too fast, or too slow, in proportion to the rest, the main purpose is defeated. It is in vain, continues he, to plead in excuse the want of hands or cattle; because these wants must either be supplied, or the planter must contract his views, and proportion them to his ability; for the attempt to do more than can be attained, will lead into perpetual disorder, and terminate in poverty.

“Unfortunately, however, neither prudence in the management, nor favourable soils, nor seasonable weather, will at all times exempt the planter from misfortunes. The sugar-cane is subject to a disease which no foresight can obviate, and for which human wisdom has hitherto, I fear, attempted in vain to find a remedy. This calamity is called the blast; it is the aphid of Linnæus, and is distinguished into two kinds, the black and the yellow, of which the yellow is the most destructive. It consists of myriads of little insects, invisible to the naked eye, whose proper food is the juice of the cane, in search of which they wound the tender blades, and consequently destroy the vessels. Hence the circulation being impeded, the growth of the plant is checked, until it withers or dies in proportion to the degree of the ravage.

JAMAICA.

" Hitherto I have said nothing of a very important branch in the sugar planting, I mean the method of manuring the lands. The necessity of giving even the best soil occasional assistance is universally admitted, and the usual way of doing it in the West Indies is now to be described.

" The manure generally used is a compost, formed,

" 1st. Of the coal and vegetable ashes, drawn from the fires of the boiling and still-houses.

" 2dly. Feculences discharged from the still-house, mixed up with rubbish of buildings, white lime, &c.

" 3dly. Refuse, or field trash, that is, the decayed leaves and stems of the canes, so called in contradistinction to cane-trash, reserved for fuel, and hereafter to be described.

" 4thly. Dung, obtained from the horse and mule stables, and from moveable pens, or small enclosures made by posts and rails, occasionally shifted upon the lands intended to be planted, and into which the cattle are turned at night.

" 5thly. Good mould, collected from gullies, and other waste places, and thrown into the cattle pens.

" The first, ashes, is commonly supposed to be a manure of itself, well adapted for cold and stiff clays; and in some parts of Jamaica, it is the practice, in the fall of the year, to carry it out unmixed, in cart loads, to the land where it is intended to be used. It is left there (or in some spot adjoining) in large heaps, until the land is holed; after which a basket full, containing commonly from fifteen to twenty pounds, is thrown into each cane-hole, and mixed with the mould at the time the plants are put into the ground. It may be doubted, however, whether ashes, applied in this manner, are of much advantage: I have been told, that if the land is opened five years afterwards, they will be found undissolved. At other times, wain loads of the compost, or dunghill before mentioned, are carried out and used in nearly the same manner as the ashes.

" But the chief dependence of the Jamaica planter in manuring his lands, is on the moveable pens, or occasional inclosures before described; not so much for the quantity of dung collected by means of those enclosures,

closures, as for the advantage of the urine from the cattle (the best of JAMAICA, all manures), and the labour which is saved by this system. I believe, indeed, there are a great many overseers who give their land no aid of any kind, other than that of shifting the cattle from one pen to another, on the spot intended for planting, during three or four months before it is ploughed or holed.

"What has hitherto been said, however, relates solely to the method of preparing lands for plant-canes. Those who trust chiefly to ratoons, find it as necessary to give their cane-fields attention and assistance from the time the canes are cut, as it was before they were planted. It is the advice of Colonel Martin, so soon as the canes are carried to the mill, to cut off, by a sharp hoe, all the heads of the cane-stools, three inches below the surface of the soil, and then fill up the hole with fine mould; by which means, he thinks that all the sprouts rising from below will derive more nutriment, and grow more equally and vigorously than otherwise. I know not that this advice is adopted in any of the sugar islands. It is the practice, however, in many parts of Jamaica, to spread baskets full of dung round the stools, so soon after the canes have been cut as circumstances will admit, and the ground has been refreshed by rain. In dry and scorching weather it would be labour lost. The young sprouts are, at the same time, cleared of weeds, and the dung which is spread round them being covered with cane-trash, that its virtues may not be exhaled by the sun, is found at the end of three or four months to be soaked into and incorporated with the mould. At this period the ratoons are again well cleaned, and the spaces between the ranks effectually hoe-ploughed; after which very little care is thought requisite until the canes are fit for cutting; the ancient practice of trash-ing ratoons, i. e. stripping them of their outward leaves, being of late very generally and justly exploded.

"Such is the general system of preparing and manuring the lands in Jamaica. I have been told, that more attention is paid to this branch of husbandry in some of the islands to Windward; but I suspect that there is, in all of them, very great room for improvement, by means of a judicious rotation of crops, and artificial assistance. Why, for instance, are not the manures of lime and sea-sand, which abound in these islands,

JAMAICA. and have been found so exceedingly beneficial in Great Britain, brought into use? Limestone alone, even without burning (the expence of which might perhaps be an objection), has been found to answer in cold, heavy, and moist lands; no other trouble being requisite than merely to spread it over the ground, and break it into small pieces by sledge hammers. Of this the quantities are inexhaustible. Marl is another manure of vast and general utility in Great Britain. It enriches the poorest land, opens the stiffest, and sweetens and corrects the most rank. Lands have been raised, by the use of this manure, from two shillings per acre to a guinea, annual rent. Now there is no country under the sun wherein a soft unctuous marl more abounds than in Jamaica. To the question, why no trial has yet been made of it? no better answer, I believe, can be given, than that the planters in general have no leisure for experiments, and that it is difficult to make agents and servants (who have every thing to risk and nothing to gain) walk out of the sure and beaten track of daily practice. Every man's experience confirms this observation.*

* Edwards's History of the West Indies, vol. ii. book v. chap. i. p. 233.

PORTO RICO.

THIS isle, which belongs to Spain, is about 120 B. miles in length, PORTO RICO. by 40 in breadth. Its size and consequence are well known to the possessors, being a fertile, beautiful, and well watered country. The chief trade is in sugar, ginger, cotton, hides; with some drugs, fruits, and sweetmeats: and the northern part is said to contain mines of gold and silver. Porto Rico was discovered by Colon in 1493; and was subjugated by Ponce de Leon, the first explorer of Florida, about 1509. The Spanish voyagers and authors, whose imagination magnified every feature of the new world, reported the native population at 600,000; while perhaps a real enumeration might have reduced them to 60,000, if not to 20,000.

Concerning Porto Rico there are few recent materials, though it be an island of considerable importance, and little inferior to Jamaica. We recently attempted its subjugation, but were repulsed by a few French who occupied an advanced station, and whose courage led to apprehensions of a more firm and obstinate resistance than would have been encountered. In the early part of his work Estalla has given an account of this island from meagre and imperfect materials.* He says that the chief products are sugar, ginger, cotton, flax, coffee, cassia, incense, hides, of which more than two thousand are sent every year to Europe, and a few mules much esteemed in Jamaica. There is also abundance of excellent fruits and good salt. It is however very subject to hurricanes, and a terrible one in 1742 destroyed the fertility of the island for many years. It is thinly inhabited by about ten thousand souls. The chief town is Porto Rico, in a little isle, founded

* Estalla, vol. xii. p. 20.

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PORTO RICO. in 1510, and formerly a chosen seat of smugglers. On the south-west of the town there is a fort called St. Antonio; and in 1766 the criminals were employed in additional works. The Spanish inhabitants of the town may be about five hundred. In 1598 this island was taken by the Duke of Cumberland; and in 1797 was attempted by the English without success.

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THE CARIBBEE ISLANDS.

THIS range extends from Tobago, in the south, to the Virgin islands in the north; and includes Barbadoes, which stands rather detached towards the east, being about thirty-five degrees from the African islands of Cape Verd. The Caribbee Islands are of noted fertility and commercial advantage, the chief possessors being the English and French. Barbadoes, Antigua, St. Christopher's, St. Vincent, Dominica, Grenada, Montserrat, Nevis, and the Virgin Isles, are British; and Barbadoes by far the most important, as it is supposed to contain 17,000 white inhabitants; while the others rarely exceed 2000. The French Caribbee islands are Martinique, Guadaloupe, St. Lucie, Tobago, and some islets. The Danes possess St. Croix, St. Thomas, and St. John, which belong to the Virgin group; while the Swedes hold St. Bartholomew, and the Dutch St. Eustatius. Of the whole group, Barbadoes and Guadaloupe appear to be the most important; and the last, including Grand Terre and Bassé Terre, is the most considerable in size, being about 60 B. miles in length, by 25 in breadth. The Caribbee islands in general were discovered by Colon, on his second voyage, when he visited Dominica, Guadaloupe, and Antigua: but they were neglected by the Spaniards, eager in quest of the gold of the larger islands. Barbadoes is said to have been discovered by the Portuguese, who having made no settlement, it was seized by the English in the reign of James I. and the foundation of James Town was laid in 1624. Though the isle be only about twenty miles in length, and thirteen in breadth, yet this early English settlement has prospered to a surprising degree, exporting about 10,000 hhds. of sugar, and 6000 puncheons of rum, besides cotton, ginger, &c.* Grenada, and most of the others, were originally settled

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Barbadoes

* In a hurricane, 10th October 1780, the blacks and whites who perished were computed at 4326, and the damage at 1,320,564l. 15s. sterling. Edwards, i. 347.

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by the French, towards the middle of the seventeenth century. St. Christopher's was however a very early British settlement. Antigua is also said to have been planted by the English in 1632; while the French began to send colonies to Guadaloupe about 1630. The subsequent struggles between the two powers, concerning these valuable islands, would form too complex a narrative for the present design. They are generally plain and fertile, being remarkably contrasted with the barrenness of the Bahama group. In some there are small ranges of hills; and in Guadaloupe there appear to have been many volcanoes, the noted *Souffriere* being a kind of solfaterra, or vast mass of sulphur, emitting continual smoke. Dominica also contains several volcanoes. The products and exports of all these isles are similar, being sugar, rum, coffee, cacao, indigo, cotton, &c.*

Nor must we omit to mention the small group running parallel with the shore of South America, of which Curazao and Buenayre belong to the Dutch, who import African slaves, whom they sell to the Spaniards on the continent.

Trinidad.

Under this division may also be classed the island of Trinidad, recently ceded by Spain to Great Britain. This island is about 90 B. miles in length, while the medial breadth may be about 30. Colon landed here in 1498, when he discovered the mouth of the Orinoco; but the possession was neglected till 1535. The climate is said to be excellent, and remarkably free from hurricanes, which are dreadful scourges of the other American isles.† Heavy rains prevail from the middle of May till the end of October; and there are so many rivers, that the dryness of the other half of the year is little regretted. Sometimes slight earthquakes are felt, but little dangerous. In the interior are four groups of mountains, which, with some other ridges towards the shores, are computed at a third part of the territory; the other two-thirds are said to

* St. Vincent's may be said to be divided between the black Caribs, or descendants of revolted negroes, and the British, whose territory is divided into five parishes, the chief town being Kingstown; Edwards, i. 403. The cacao or chocolate nut grows on a tree resembling a cherry. The pods, when green, are like cucumbers, and contain from twenty to thirty nuts, or rather kernels, not unlike almonds. The cakes seem mixed with flour and Castile soap. Edwards, ii. 308. There is a confusion of *cacao* and *cocoa* in some authors.

† Raynal, iv. 165.

consist of a most fertile soil. The southern coast is well adapted to the culture of coffee; and on the west is a large harbour, reputed very secure in all seasons. Here are the Spanish settlements, the largest containing only about eighty huts. The cocoa trees perished in 1727, by the force as is said of the northern winds; and any new plantations ought of course to be protected on that quarter by thick fences of forest trees.*

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To the foregoing brief general description some interesting amplifications may be added.

The Caribs, who inhabited several islands in the West Indies, chiefly those called the Windward Islands, are supposed to have migrated from the opposite shores of South America. Their ferocity greatly infested the more pacific inhabitants of Cuba, Hispaniola, Jamaica, and Porto Rico, who were of very different origin and dispositions.† Mr. Edwards has compiled, with great care, an account of the manners of the Caribs which shall here be inserted.

“ Their fierce spirit and warlike disposition have already been mentioned. Historians have not failed to notice these, among the most distinguishable of their qualities.—Restless, enterprising, and ardent, it would seem they considered war as the chief end of their creation, and the rest of the human race as their natural prey; for they devoured without remorse the bodies of such of their enemies (the men at least,) as fell into their hands. This custom is so repugnant to our feelings, that for a century past, until the late discoveries of a similar practice in the countries of the Pacific ocean, the philosophers of Europe had boldly impeached the veracity of the most eminent ancient voyagers who had first recorded the existence of it. Even Labat, who resided in the West Indies at a period when some of the islands still remained in the possession of

* In the map of La Cruz the island of Trinidad appears in a very different form from that assigned by D'Anville, and commonly received. The length is from N. to S. instead of E. and W. and the chief settlement, S. Josef de Oruna, is in the N. W. not far from the port de Espana, the best harbour. The length of the island is given at about 80 B. miles, by half the breadth.

† They are supposed to have sprung from the Arawacs of Guiana, a mild and humane race.

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the Caribs, declares it to be his opinion, that instances of this abominable practice among them, were at all times extremely rare; the effect only of a sudden impulse of revenge arising from extraordinary and unprovoked injury; but that they ever made premeditated excursions to the larger islands, for the purpose of devouring any of the inhabitants, or of seizing them to be eaten at a future time, he very confidently denies.

"Nevertheless there is no circumstance in the history of mankind better attested than the universal prevalence of these practices among them. Columbus was not only informed of it by the natives of Hispaniola, as I have already related, but having landed himself at Guadaloupe on its first discovery, he beheld in several cottages the head and limbs of the human body recently separated, and evidently kept for occasional repasts. He released, at the same time, several of the natives of Porto Rico, who, having been brought captives from thence, were reserved as victims for the same horrid purpose.

"Thus far it must be confessed, the disposition of the Caribs leaves no very favourable impression on the mind of the reader; by whom it is probable they will be considered rather as beasts of prey, than as human beings; and he will think, perhaps, that it was nearly as justifiable to exterminate them from the earth, as it would be to destroy the fiercest monsters of the wilderness; since they who shew no mercy, are entitled to no pity.

"But, among themselves they were peaceable, and towards each other faithful, friendly, and affectionate. They considered all strangers, indeed, as enemies; and of the people of Europe they formed a right estimation. The antipathy which they manifested towards the unoffending natives of the larger islands appears extraordinary; but it is said to have descended to them from their ancestors of Guiana: they considered those islanders as a colony of Arrowauks, a nation of South America, with whom the Caribs of that continent were continually at war. We can assign no cause for such hereditary and irreconcilable hostility. With regard to the people of Europe, it is allowed that, whenever any of them had acquired their confidence, it was given without reserve. Their friendship was as warm as their enmity was implacable. The

Caribs of Guiana still fondly cherish the tradition of Raleigh's alliance, and to this day preserve the English colours which he left them at parting. CARIBBE
ISLANDS.

"Of the loftiness of their sentiments and their abhorrence of slavery, a writer not very partial towards them, gives the following illustration: 'There is not a nation on earth, says Labat, more jealous of their independency than the Caribs. They are impatient under the least infringement of it; and when, at any time, they are witnesses to the respect and deference which the natives of Europe observe towards their superiors, they despise us as abject slaves; wondering how any man can be so base as to crouch before his equal.' Rochefort, who confirms this account, relates also that when kidnapped and carried from their native islands into slavery, as they frequently were, the miserable captives commonly sunk under a sense of their misfortune, and finding resistance and escape hopeless, sought refuge in death from the calamities of their condition.

"To this principle of conscious equality and native dignity, must be imputed the contempt which they manifested for the inventions and improvements of civilized life. Of our fire arms they soon learnt, by fatal experience, the superiority to their own weapons; and those, therefore, they valued; but our arts and manufactures they regarded as we regard the amusements and baubles of children:—hence the propensity to theft, so common among other savage nations, was altogether unknown to the Caribs.

"The ardour which has been noticed in them for military enterprise, had a powerful influence on their whole conduct. Engaged in continual warfare abroad, they seldom appeared cheerful at home. Reflections on past miscarriage, or anxious schemes of future achievement, seemed to fill up many of their hours, and render them habitually thoughtful, pensive, and silent. Love itself, which exerts its influence in the frozen deserts of Iceland, maintained but a feeble dominion over the Caribs. Their insensibility towards their women, although they allowed a plurality of wives, has been remarked by many writers; and it must have arisen from extrinsic causes;—from the predominance of passions strong enough to counteract the effects of a climate which powerfully disposes to volup-

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tuousness, and awakens the instincts of nature much sooner than colder regions. The prevailing bias of their minds was distinguishable even in their persons. Though not so tall as the generality of Europeans, their frame was robust and muscular; their limbs flexible and active, and there was a penetrating quickness, and a wildness in their eyes, that seemed an emanation from a fierce and martial spirit. But, not satisfied with the workmanship of nature, they called in the assistance of art, to make themselves more formidable. They painted their faces and bodies with arnotto so extravagantly, that their natural complexion, which was nearly that of a Spanish olive, was not easily to be distinguished under the surface of crimson. However, as this mode of painting themselves was practised by both sexes, perhaps it was at first introduced as a defence against the venomous insects so common in tropical climates, or possibly they considered the brilliancy of the colour as highly ornamental; but the men had other methods of deforming their persons, which mere perversion of taste alone, would not, I think, have induced them to adopt. They disfigured their cheeks with deep incisions and hideous scars, which they stained with black, and they painted black and white circles round their eyes. Some of them perforated the cartilage that divides the nostrils, and inserted the bone of some fish, a parrot's feather, or a fragment of tortoise-shell,—a frightful custom, practised also by the natives of New Holland, and they strung together the teeth of such of their enemies as they had slain in battle, and wore them on their legs and arms, as trophies of successful cruelty.

“To draw the bow with unerring skill, to wield the club with dexterity and strength, to swim with agility and boldness, to catch fish and to build a cottage, were acquirements of indispensable necessity, and the education of their children was well suited to the attainment of them. One method of making their boys skilful, even in infancy, in the exercise of the bow, was to suspend their food on the branch of a tree, compelling the hardy urchins to pierce it with their arrows, before they could obtain permission to eat. But these were subordinate objects:—The Caribs instructed their youth, at the same time, in lessons of patience and fortitude; they endeavoured to inspire them with courage in war, and a contempt of danger and death;—above all things to instil

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into their minds an hereditary hatred, and implacable thirst of revenge, CARIBBEE ISLANDS. towards the Arrowauks. The means which they adopted for these purposes were in some respects superstitious; in others cruel and detestable.

"As soon as a male child was brought into the world, he was sprinkled with some drops of his father's blood. The ceremonies used on this occasion were sufficiently painful to the father, but he submitted without emotion or complaint; fondly believing, that the same degree of courage which he had himself displayed, was by these means transmitted to his son. As the boy grew, he was soon made familiar with scenes of barbarity; he partook of the horrid repasts of his nation, and he was frequently anointed with the fat of a slaughtered Arrowauk; but he was not allowed to participate in the toils of the warrior, and to share the glories of conquest, until his fortitude had been brought to the test. The dawn of manhood ushered in the hour of severe trial. He was now to exchange the name he had received in his infancy, for one more founding and significant;—a ceremony of high importance in the life of a Carib, but always accompanied by a scene of ferocious festivity and unnatural cruelty.

"The severities inflicted on such occasions by the hands of fathers on their own children, exhibit a melancholy proof of the influence of superstition in suppressing the most powerful feelings of nature; but the practice was not without example. Plutarch records the prevalence of a similar custom among the Lacedemonians. "At Sparta," says the historians, "boys are whipped for a whole day, oftentimes to death, before the altar of Diana, and there is a wonderful emulation among them who best can sustain the greatest number of stripes." Nor did the Carib youth, yield in fortitude to the Spartan. If the severities he sustained extorted the least symptom of weakness from the young sufferer, he was disgraced for ever; but if he rose superior to pain, and baffled the rage of his persecutors, by perseverance and serenity, he received the highest applause. He was thenceforth numbered among the defenders of his country, and it was pronounced by his relations and countrymen, that he was now a man like one of themselves.

"A penance still more severe, and torments more excruciating; stripes, burning and suffocation, constituted a test for him who aspired

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to the honour of leading forth his countrymen to war; for in times of peace the Caribs admitted of no supremacy but that of nature. Having no laws, they needed no magistrates. To their old men, indeed, they allowed some kind of authority, but it was at best ill-defined, and must at all times have been insufficient to protect the weak against the strong. In war, experience had taught them that subordination was as requisite as courage; they, therefore, elected their captains in their general assemblies with great solemnity; but, as hath been observed, they put their pretensions to the proof with circumstances of outrageous barbarity: the recital, however, is disgusting, and may well be suppressed.

"If it appears strange that where so little was to be gained by pre-eminence, so much should be endured to obtain it, it must be considered that, in the estimation of the candidate, the reward was doubtless more than adequate to the cost of the purchase. If success attended his measures, the feast and the triumph awaited his return. He exchanged his name a second time; assuming in future that of the most formidable Arrowauk that had fallen by his hand. He was permitted to appropriate to himself, as many of the captives as he thought fit, and his countrymen presented to his choice the most beautiful of their daughters in reward of his valour.

"It was probably this last-mentioned testimony of public esteem and gratitude that gave rise in these islands to the institution of polygamy, which, as hath been already observed, prevailed universally among them, and still prevails among the Caribs of South America;—an institution the more excusable, as their women, from religious motives, carefully avoided the nuptial intercourse after pregnancy. I am sorry to add, that the condition of these poor creatures was at the same time truly wretched. Though frequently bestowed as the prize of successful courage, the wife thus honourably obtained, was soon considered of as little value as the captive. Deficient in those qualities which alone were estimable among the Caribs, the females were treated rather as slaves than companions. They sustained every species of drudgery: they ground the maize, prepared the cassivi, gathered in the cotton, and wove the hammock; nor were they allowed even the privilege of eating in presence of their husbands: under these circumstances, it is not wonderful that

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that they were less prolific than the women of Europe. But brutality towards their wives was not peculiar to the Caribs. It has prevailed in all ages and countries among the uncivilized part of mankind; and the first visible proof that a people is emerging from savage manners, is a display of tenderness towards the female sex.

"Perhaps a more intimate knowledge (not now to be obtained) would have softened many of the shades which thus darken the character of these Islanders, and have discovered some latent properties in their principles and conduct, tending to lessen, though not wholly to remove, the disgust we naturally feel in beholding human nature so debased and degraded; but of many particulars wherein curiosity would desire to be gratified, we have no account. We know but little; for instance, concerning their domestic economy, their arts, manufactures, and agriculture; their sense of filial and paternal obligations; their religious rites and funeral ceremonies. Such further information, however, in these and other respects, as authorities the least disputable afford, I have abridged in the following detached observations.

"Besides the ornaments which we have noticed to have been worn by both sexes, the women, on arriving at the age of puberty, were distinguished also by a sort of buskin or half boot, made of cotton, which surrounded the small part of the leg. A distinction, however, to which such of their females as had been taken in the chance of war, dared not aspire. In other respects both male and female appeared as naked as our first parents before the fall. Like them, as they knew no guilt, they knew no shame; nor was clothing thought necessary to personal comfort, where the chill blast of winter is never felt.

"Their hair was uniformly of a shining black, strait; and coarse; but they dressed it with daily care, and adorned it with great art; the men in particular, decorating their heads with feathers of various colours. As their hair thus constituted their chief pride, it was an unequivocal proof of the sincerity of their sorrow, when, on the death of a relation or friend, they cut it short like their slaves and captives; to whom the privilege of wearing long hair was rigorously denied. Like most other nations of the new hemisphere, they eradicated, with great nicety, the incipient beard, and all superfluous hairs on their bodies;—a circumstance

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stance which has given rise to a notion that all the Aborigines of America were naturally beardless. This opinion is indeed countenanced by many respectable writers, but after much inquiry, and some instances of ocular inspection, I am satisfied that it is groundless.

"The circumstance the most remarkable concerning the persons of the Caribs, was their strange practice of altering the natural configuration of the head. On the birth of a child, its tender and flexible skull was confined between two small pieces of wood, which, applied before and behind, and firmly bound together on each side, elevated the forehead, and occasioned it, and the back part of the skull, to resemble two sides of a square; an uncouth and frightful custom still observed, by the miserable remnant of red Caribs in the island of St. Vincent.

"They resided in villages which resemble an European encampment; for their cabins were built of poles fixed circularly in the ground, and drawn to a point at the top. They were then covered with leaves of the palm tree. In the centre of each village was a building of superior magnitude to the rest. It was formed with great labour, and served as a public hall or state house, wherein we are assured that the men (excluding the women) had their meals in common; "observing that law," saith the Earl of Cumberland, who visited these islands in 1596, "which in Lycurgus's mouth was thought strange and needless." These halls were also the theatres where their youth were animated to emulation, and trained to martial enterprise by the renown of their warriors, and the harangues of their orators.

"Their arts and manufactures, though few, displayed a degree of ingenuity, which one would have scarcely expected to find amongst a people so little removed from a state of mere animal nature, as to reject all dress as superfluous. Columbus observed an abundance of substantial cotton cloth in all the islands which he visited; and the natives possessed the art of staining it with various colours, though the Caribs delighted chiefly in red. Of this cloth they made hammocks, or hanging beds, such as are now used at sea;—for Europe has not only copied the pattern, but preserved also the original name.

"They possessed likewise the art of making vessels of clay for domestic uses, which they baked in kilns like the potters of Europe. The ruins
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of many of these kilns were visible not long since in Barbadoes, where specimens of the manufacture are still frequently dug up; and Mr. Hughes, the historian of that island, observes, that they far surpass the earthenware made by the negroes, in thinness, smoothness, and beauty. Besides those, they invented various other utensils for economical purposes, which are enumerated by Labat. The baskets which they composed of the fibres of the palmeto leaves, were singularly elegant, and we are told, that their bows and arrows, and other weapons, displayed a neatness and polish, which the most skilful European artist would have found it difficult to have excelled, even with European tools.

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"Of the nature and extent of their agriculture, the accounts are slender and unsatisfactory. We are told, on good authority, that among the Caribs of the continent, there was no division of land, every one cultivating in proportion to his exigencies. Where no criminal jurisdiction is established, the idea of private property must necessarily be unknown, or imperfect; and in these islands where land is scarce, it seems probable that, as among some of the tribes of South America, cultivation was carried on by the joint labour of each separate community, and their harvest deposited in public granaries, whence each family received its proportion of the public stock.—Rochefort indeed observes, that all their interests were in common.

"Their food, both vegetable and animal, excepting in the circumstance of their eating human flesh, seems to have been the same in most respects, as that of the natives of the larger islands, which shall be described hereafter. But although their appetites were voracious, they rejected many of the best bounties of nature. Of some animals they held the flesh in abhorrence; these were the pecary, or Mexican hog, the manati, or sea cow, and the turtle. Labat observes, that they scrupled likewise to eat the eel, which the rivers in several of the islands supply in great plenty.

"The striking conformity of these, and some other of their prejudices and customs, to the practices of the Jews, has not escaped the notice of historians.—But whether the Caribs were actuated by religious motives, in thus abstaining from those things which many nations

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account very wholesome and delicious food, we are no where sufficiently informed.

" It most probably was, however, the influence of superstition that gave rise to these, and other ceremonies equally repugnant to the dictates of nature and common sense;—one of which appears at first extraordinary and incredible, but it is too well attested to be denied. On the birth of his first son, the father retired to his bed, and fasted with a strictness that often endangered life. Lafitau, observing that the same custom was practised by the Tibarenians of Asia, and the Iberians or ancient inhabitants of Spain, and is still in use among the people of Japan, not only urges this circumstance as a proof, among others, that the New World was peopled from the Old, but pretends to discover in it also some traces of the doctrine of original sin: he supposes that the severe penance thus voluntarily submitted to by the father, was at first instituted in the pious view of protecting his issue from the contagion of hereditary guilt, averting the wrath of offended Omnipotence at the crime of our first parents, and expiating their guilt by his sufferings.

" The ancient Thracians, as we are informed by Herodotus, when a male child was brought into the world, lamented over him, in sad vaticination of his destiny, and they rejoiced when he was released by death from those miseries which they considered as his inevitable portion in life: but, whatever might have been the motives that first induced the Caribs to do penance on such occasions, it would seem that grief and dejection had no great share in them; for the ceremony of fasting was immediately succeeded by rejoicing and triumph, by drunkenness and debauchery. Their lamentations for the dead, seem to have arisen from the more laudable dictates of genuine nature; for, unlike the Thracians on these solemnities, they not only despoiled their hair, as we have before related, but when the master of the family died, the surviving relations, after burying the corpse in the centre of his own dwelling, with many demonstrations of unaffected grief, quitted the house altogether, and erected another in a distant situation.

" Unfortunately, however, if now and then we distinguish among them some faint traces of a rational piety, our satisfaction is of short continuance.

No light, but rather darkness visible,
Serves only to discover sights of woe.

MILTON.

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or it is a light that glimmers for a moment, and then sets in blood.

"It is asserted, and I believe with truth, that the expectation of a future state has prevailed amongst all mankind, in all ages and countries of the world. It is certain, that it prevailed among the Caribs; who not only believed, that death was not the final extinction of their being, but pleased themselves also with the fond conceit, that their departed relations were secret spectators of their conduct;—that they still sympathised in their sufferings, and participated in their welfare. To these notions, so flattering to our wishes,—perhaps congenial to our nature,—they added others of a dreadful tendency; for, considering the soul as susceptible of the same impressions, and possessing the same passions, as when allied to the body, it was thought a religious duty to their deceased heroes, to sacrifice at their funerals some of the captives which had been taken in battle. Immortality seemed a curse without military glory: they allotted to the virtuous and the brave the enjoyment of supreme felicity, with their wives and their captives, in a sort of Mahometan paradise. To the degenerate and the cowardly, they assigned a far different portion: these, they doomed to everlasting banishment beyond the mountains;—to unremitting labour, in employments that disgrace manhood:—and this disgrace they supposed would be heightened by the greatest of all afflictions, captivity and servitude among the Arrowauks.

"It might seem, that this idea of a state of retribution after death, necessarily flowed from a well-founded belief in the existence of an all-wise and Almighty Governor and Judge of the Universe; but we are told, notwithstanding, that the minds of the Caribs were not elevated to this height. 'They admitted,' says Rochefort, 'that the earth was their bountiful parent, which yielded them all the good things of life, but they were so lamentably sunk in darkness and brutality, as to have formed no conception of its beneficent Creator, through the continual energy of whose divine influence alone it yields any thing. They had not even a name for the Deity.' Other writers, however, of equal authority, and even the same writer elsewhere, presents us with a different

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presentation in this respect, and allow, that the Caribs entertained an awful sense, (perplexed indeed and indistinct) of one great universal Cause,—of a superior, wise, and invisible Being of absolute and irresistible power.—Like the ancient heathens, they admitted also the agency of subordinate divinities.—They even supposed that each individual person had his peculiar protector, or tutelary deity. Nor is it true, as affirmed by some authors, that they had no notion of practical worship; for, besides the funeral ceremonies above mentioned, which arose surely from a sense of mistaken piety, they had their lares and penates, gods of their own creating, intended as symbols probably of their invisible deities, to whom they offered sacrifices, similar to those of the ancient Romans in their days of simplicity and virtue. It was their custom to erect in every cottage a rustic altar, composed of banana leaves and rushes, whereon they occasionally placed the earliest of their fruits, and the choicest of their viands, as humble peace-offerings, through the mediation of their inferior deities to incensed Omnipotence: for it is admitted, that their devotions consisted less in the effusions of thankfulness, than in deprecations of wrath;—but herein neither were they distinguishable from the rest of mankind, either in the old world or the new. We can forget benefits, though we implore mercy. Strange however it is, that the same authors who accuse them of atheism, should accuse them likewise, in the same moment, of polytheism and idolatry.

“Atheists they certainly were not; and although their system was not that of pure theism, yet their idolatry was probably founded on circumstances, the moral influence of which has not hitherto, I think, been sufficiently noticed. If their devotion, as we have seen, was the offspring, not of gratitude, but of fear;—if they were less sensible of the goodness, than terrified at the judgments of the Almighty; it should be remembered, that in the climate of the West Indies, the tremendous irregularities of nature are dreadfully frequent;—the hurricane that sweeps nations to the deep, and the earthquake that swallows continents in its bosom.—Let us not then hastily affix the charge of impiety on these simple people, if, when they beheld the elements combine for their destruction, they considered the Divine Being as infinite indeed in power, but severe in his justice, and inexorable in his anger. Under this

impression, the mind, humbled to the dust in the consciousness of its own imbecility, and scarce daring to lift up a thought to the Great Cause of all things, fondly wishes for some mild and gracious interpreter, some amiable intermediate agent, in whom to repose with confidence, as in a guardian and a friend. This desire increasing, is at length exalted to belief. The soul, seeking refuge from its own apprehensions, creates imaginary beings, by whose mediation it hopes to render itself less despicable in the sight of the Supreme. To these its devotions are intrusted, and its adorations paid. We may lament the blindness of these poor savages, and exult in our own superiority in this respect, but let us not forget, that in the most cultivated periods of the human understanding, (before the light of revelation was graciously displayed,) a similar superstition was practised by all the various nations of the heathen world; of which, not one perhaps had so strong an apology to plead as the Caribs.

"These observations, however, extend only to the fair side of their religion, the worship of benevolent deities. A darker superstition likewise prevailed among all the unenlightened inhabitants of these climates; for they not only believed in the existence of demons and evil spirits, but offered to them also, by the hands of their Boyez, or pretended magicians, sacrifices and worship; wounding themselves, on such solemnities, with an instrument made of the teeth of the agouti, which inflicted horrible gashes; conceiving, perhaps, that the malignant powers delighted in groans and misery, and were to be appeased only by human blood. I am of opinion, nevertheless, that even this latter species of idolatry originated in reverential piety, and an awful sense of almighty power and infinite perfection. That we receive both good and evil at the hands of God, and that the Supreme Being is equally wise and benevolent in the dispensation of both, are truths which we are taught, as well by cultivated reason, as by holy writ; but they are truths, to the right apprehension of which uncivilized man was perhaps at all times incompetent. The savage, indeed, amidst the destructive terrors of the hurricane and the earthquake, might easily conclude, that nothing less than the Omnipotence itself, 'visiting the nations in his wrath,' could thus harrow up the world; but the calamities of daily occurrence,—the vari-

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ous appearances of physical and moral evil which hourly embitter life, he dares not ascribe to an all-perfect and merciful Being. To his limited conception, such a conclusion was derogatory from divine justice, and irreconcilable with infinite wisdom. To what then would he impute these terrifying and inexplicable phenomena, but to the malignant influence of impure spirits and aerial demons? The profanations built on such notions, certainly throw a light on the Christian religion, if they serve not as a collateral evidence of its divine origin.

"A minute detail of the rites and ceremonies to which these, and other religious tenets, gave birth among the Caribs, most of them unamiable, many of them cruel, together with an illustration of their conformity to the superstitions of the pagan theology, would lead me too far; nor is such a disquisition necessary. It is sufficient for me to have shewn, that the foundations of true religion, the belief of a Deity, and the expectation of a future state, (to borrow the expression of an eloquent prelate,) 'are no less conformable to the first natural apprehensions of the untutored mind, than to the soundest principles of philosophy.'

"I have thus selected and combined, from a mass of discordant materials, a few striking particulars in the character, manners, and customs of the ancient inhabitants of the Caribbean Islands. The picture is not pleasing; but, as I have elsewhere observed, it may lead to some important conclusions; for, besides correcting many wild and extravagant fancies which are afloat in the world respecting the influence of climate on the powers of the mind, it may tend to demonstrate the absurdity of that hypothesis of some eminent philosophers, which pronounces savage life the genuine source of unpolluted happiness; falsely deeming it a state conformable to our nature, and constituting the perfection of it. It is indeed no easy task, as Rousseau observes, to discriminate properly between what is originally natural, and what is acquired, in the present constitution of man: yet thus much may be concluded, from the account I have given of the Caribs; that they derived their furious and sanguinary disposition, not from the dictates of nature, but from the perversion and abuse of some of her noblest endowments. Civilization and science would not only have given them gentler manners, but probably have eradicated also many of their barbarous rites and gloomy superstitions,

tions, either by the introduction of a purer religion, or by giving energy and effect to those latent principles, which I have shewn had a foundation among them. But while I admit the necessity and benevolent efficacy of improved manners and social intercourse, conceiving that man by the cultivation of his reason, and the exercise of his faculties, alone answers the end of his creation, I am far from concurring with another class of philosophers, who, widely differing from the former, consider a state of pure nature as a state of unrelenting ferocity and reciprocal hostility; maintaining, that all the soft and tender affections are not originally implanted in us, but are superinduced by education and reflection. A retrospect to what has been related of the Caribs will shew the fallacy of this opinion. Man, as he comes from the hand of his Creator, is every where constituted a mild and a merciful being. It was by rigid discipline and barbarous example, that the Carib nation trained up their youth to suffer with fortitude, and to inflict, without pity, the utmost exertions of human vengeance. The dictates of nature were as much violated by those enormities of savage life, as they are suppressed by the cold unfeeling apathy of philosophical resentment. To the honour of humanity, it is as certain that compassion and kindness are among the earliest propensities of our nature, as that they constitute the chief ornaments and the happiness of it."*

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The same author has given an excellent description of the chief islands, Barbadoes, Grenada, St. Vincent's, and Dominica.

Barbadoes is an ancient and venerable settlement, and probably received its name from the Portuguese, but was without inhabitants when discovered by the English in 1605. In 1624, a colony was established, and the foundations laid of a town, which was called James Town, in honour of the sovereign. James Hay, earl of Carlisle, pretended to a kind of sovereignty over all the Caribbee islands, in virtue of a grant from James I., and nominated the governors of Barbadoes for a considerable number of years. The migration from the mother country to this island was so great during the commotions in England, that, in 1650, it

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* Edwards's History of the West Indies, vol. i. book i. p. 39

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was computed that there were twenty thousand white men in Barbadoes, half of them able to bear arms, and furnishing even a regiment of horse, to the number of one thousand. The colony left to its own efforts, and enjoying an unlimited freedom of trade, flourished beyond example; and on the restoration, Charles II., bestowed the dignity of baronetage on thirteen gentlemen of Barbadoes. An impost, amounting at first to ten *per cent.* was soon after imposed on all the products, a grievance not yet completely removed. In 1784, in consequence of a dreadful succession of hurricanes, the exports began to decline. The chief products are sugar, cotton, ginger, and aloes.

This island being generally the first approached on a voyage from Europe, the following remarks of a recent voyager, will introduce the reader to some phenomena of the new climate.

"The beautiful appearance of the iris resting in a number of small circles upon the surface of the ocean, also frequently attracted our notice. These were only seen near the ship, and it will occur to you, that they arose from the minute particles of water, beat off by the vessel, dividing the rays of light, and causing them to fall upon the sea in the form of rich and distinct rainbows. They are often extremely brilliant, and are seen, as it were, lying in numbers upon the water.

"The very beautiful rising and setting of the sun and moon, were the frequent and admired subjects of our contemplation. Viewed from a West India sea, the surface of these orbs does not appear, like a mere plane fixed in the heavens, as in Europe, but their convexity, and globular form are seen very distinctly. When rising, they appear as detached globes protruding from the deep: at setting they resemble distinct spheres sinking, or rather dropping, divested of their rays, into the ocean.

"The moon is brighter than in England, and reflects a clearer light. When only a few days old, the whole orb is visible, not decked in uniform brightness, as when it is at the full, but with the great body in shade, while the horned edge alone, is dressed in silver.

"The appearance of the western sky was likewise an object of novelty to us. By day the whole canopy is one fine azure expanse bright and unclouded; but, at evening, dark mountainous clouds accumulate,

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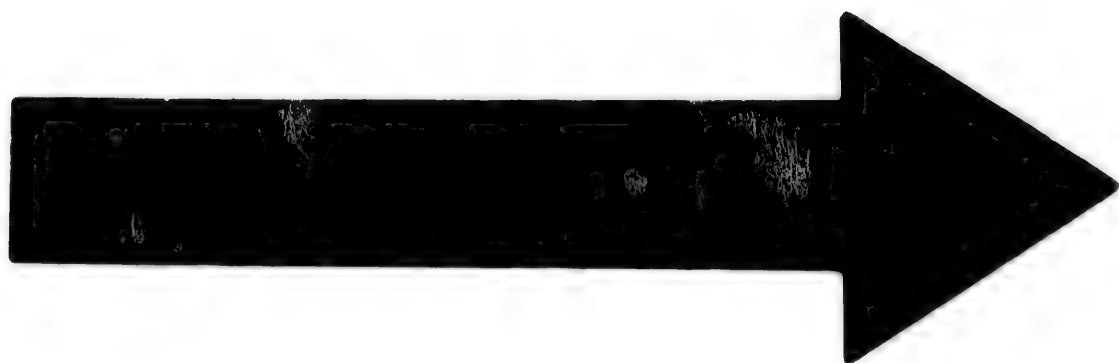
accumulate, and, gathering into deep heavy masses, impend in awful majesty of form over the horizon."*

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The same author gives the following account of a natural curiosity in Barbadoes:—

"The cool shelter of the forest was derived from the mountain-calabage, from large cedars, and from others of the oldest and finest trees of the island. Amidst these shades we descended to a narrow gully, between two mountains, to see one of the great curiosities—one of the reported phenomena of Barbadoes, "a boiling spring!" On approaching the spot, we came to a small hut in which was living an old black woman, who employed herself as a guide to exhibit, under a kind of necromantic process, all the details of this boiling and burning fountain. The old dame, bearing in her hand a lighted taper, and taking with her an empty calabash, and all the other necessary apparatus of her office, led the way from the hut down to the spring. In a still and most secluded situation, we came to a hole, or small pit filled with water, which was bubbling up, in boiling motion, and pouring from its receptacle down a narrow channel of the gully. Here our fable sorcerers, in all the silence and solemnity of magic, placing the light at her side, fell down upon her knees, and, with her calabash, emptied all the water out of the hole, then, immersing the taper in the deep void, she suddenly set the whole pit in a flame, when she instantly jumped upon her legs, and looked significantly round, as if anxious to catch the surprise expressed upon our countenances from the workings of her witchcraft. The taper being removed, the empty space continued to burn with a soft lambent flame, without the appearance of any thing to support the combustion. We observed fresh water slowly distilling into the pit from the earth at its sides, and dropping to the bottom; and as this increased in quantity, it raised the flame higher and higher in the pit, supporting it upon its surface, and conveying the appearance of the water itself being on fire, although it was very clear and pure, and not spread with any oily or bituminous matter. When the water had risen to a certain height, the flame became feeble, then gradually declined, and presently was extinct. The water was now seen to boil and bubble as before,

* Dr. Pinckard's Notes on the West Indies, vol. i. p. 218.



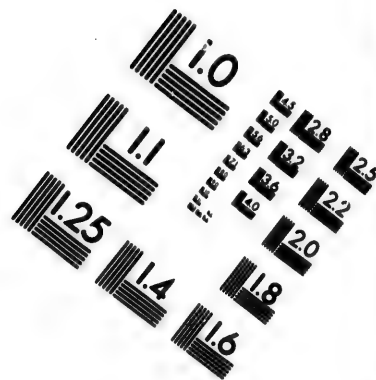
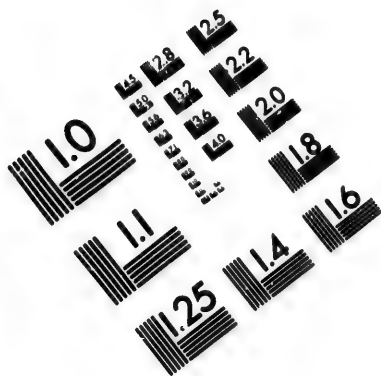
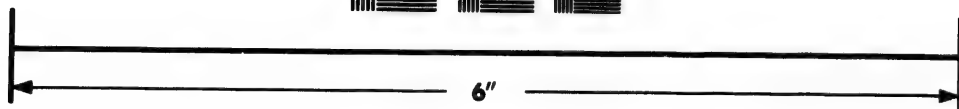
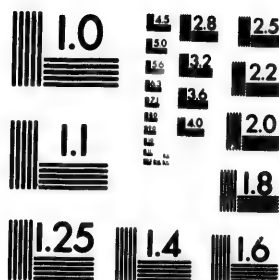


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and, soon overflowing the pit, resumed its course down the narrow channel of the gully, and all was restored to the state in which we had found it.

"You will, before this, have discovered that the water was cold, and that the boiling and burning of this fiery deep was only the effect of inflammable gas, which, escaping from the bowels of the earth, and rising from the bottom of the pit, supported the flame when it was empty, and, bubbling through it, when it was filled with water, gave it the appearance of a boiling spring. During the combustion, the smell of the inflammable air was very powerful.

"In the stones and soil, in the very rocks and roads, we traced the origin of this phenomenon of nature. Asphaltic productions abounded in every quarter; and, upon inquiry, we found that we were in the very part of the country which produces the celebrated Barbadoes tar, the smell of which saluted us as we rode along; and we even saw it distilling from the hills of hardened clay, and likewise issuing from the rocks at the sides of the road. The argillaceous soil of this neighbourhood is every where strongly impregnated with bitumen, in which you will readily perceive the origin of the "boiling, or inflammable spring."*

Some remarks on the mode of building may be given in the words of another recent amusing and instructive traveller.

"The most agreeable situations in the country are certainly those *to windward* (which is a term universally used in the West Indies to denote the east, from whence the wind generally blows); and the spots commonly chosen for building are those which are highest and most exposed to the draught of air. Some of the country houses are well contrived for all the purposes of comfort and coolness. But the mode of building generally practised might be greatly improved upon; nor should I apprehend one need go further for a perfect example than that of the native Indians in the construction of their dwellings. I was shown a model of a house, with all their domestic conveniences, imported from South America. The sides represented a wicker work of bamboo canes, and the roof a tight thatch, I believe of *palmetto* leaves; thus admitting

* Dr. Pinckard's Notes on the West Indies, 8vo. vol. 1. p. 293.

the breeze horizontally in every direction, and excluding the rain at top. Their beds were a loose elastic net-work, like the hammocks of the Caribs, who made them of cotton, and of a texture remarkably neat and durable. The only objection I found to the model of the house was, that it did not provide against an admission of rain, or the sun's rays, in an oblique direction (which might easily be done by substituting the moveable lattice-work resembling Venetian blinds, now partially in use); nor of the damps affecting always the lower parts of the West Indian houses, and which ought necessarily to be constructed of more solid materials. No doubt the aborigines, advancing towards civilization, as these beginnings evidently shew, had become studious of those comforts and conveniences which soften the rigour of the tropical sun, and which their experience would have gradually discovered much more effectually than the knowledge of the Europeans, whose inveterate habits and ideas cannot easily assimilate with the climate."*

Grenada received its name from Colon, on his third voyage 1498, but remained in possession of the Caribs till 1650, when it was taken by the French from Martinico. The Caribs were massacred with unfeeling cruelty; and a beautiful young girl of twelve or thirteen years of age, being an object of dispute between two French officers, a third coming up shot her through the head. After having remained private property for a considerable time, Grenada became vested in the crown of France in 1674; and by the peace of 1763 became subject to the crown of Great Britain, the first governor being the learned and respectable general Melville. The duty of four and a half per cent. upon all produce exported was attempted to be levied, but the claim was rejected by the court of King's Bench.† It is to be lamented that, on this and other occasions, our ingenious author has been rather prolix on topics which little interest the general reader.

"Grenada is computed to be about twenty-four miles in length, and twelve miles in its greatest breadth, and contains about 80,000 acres of land; of which, although no less than 72,141 acres paid taxes in 1776, and may therefore be supposed fit for cultivation, yet the quantity actually cultivated has never exceeded 50,000 acres. The face of the

* M'Kinnen's West Indies, p. 35.

† Edwards I. 353.

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country is mountainous, but not inaccessible in any part, and it abounds with springs and rivulets. To the north and the east, the soil is a brick mould, the same, or nearly the same, as that of which mention has been made in the history of Jamaica. On the west side, it is a rich black mould, on a substratum of yellow clay. To the south the land in general is poor, and of a reddish hue, and the same extends over a considerable part of the interior country. On the whole, however, Grenada appears to be fertile in a high degree, and by the variety, as well as excellence of its returns, seems adapted to every tropical production. The exports of the year 1776, from Grenada and its dependencies, were 14,012,157 lbs. of muscovado, and 9,273,607 lbs. of clayed sugar; 818,700 gallons of rum; 1,827,166 lbs. of coffee; 457,719 lbs. of cacao; 91,943 lbs. of cotton; 27,638 lbs. of indigo, and some smaller articles; the whole of which, on a moderate computation, could not be worth less, at the ports of shipping, than 600,000l. sterling, excluding freight, duties, insurance, and other charges. It deserves to be remembered too, that the sugar was the produce of 106 plantations only, and that they were worked by 18,293 negroes, which was therefore rather more than one hoghead of muscovado sugar, of 16 cwt. from the labour of each negro, old and young, employed in the cultivation of that commodity; a prodigious return, equalled, I believe by no other British island in the West Indies, St. Christopher's excepted."*

The capital is called St. George; and English names have also been given to the several towns and parishes: the number of white inhabitants is about twelve hundred.

St. Vincent.

St. Vincent and Dominica were left a long time neutral in the hands of the Carib inhabitants, but in 1763 were assigned to Great Britain. Here many negroes having escaped from a shipwreck, they nearly overpowered their masters, and have been absurdly called black Caribs, as a distinction from the natives, who are called red Caribs. The capital town is Kingstown, and there is a celebrated botanic garden under the care of Dr. Anderson, containing thirty acres full of West Indian vegetables, with many from the East Indies and South America.

Dominica.

Dominica was taken by the French in 1778, but restored in 1783.

* Edwards L. 381.

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" This island is twenty-nine miles in length, and may be reckoned sixteen miles in breadth. It contains many high and rugged mountains, interspersed with fine vallies, and in general they appear to be fertile. Several of the mountains contain unextinguished volcanoes, which frequently discharge vast quantities of burning sulphur. From these mountains also issue springs of hot water, some of which are supposed to possess great virtue in the case of tropical disorders. In some places the water is said to be hot enough to coagulate an egg.

" Dominica is well watered, there being upwards of thirty fine rivers in the island, besides a great number of rivulets. The soil, in most of the interior country, is a light, brown-coloured mould, and appears to have been washed from the mountains. Towards the sea-coast, and in many of the vallies, it is a deep black, and rich native earth, and seems well adapted to the cultivation of all the articles of West Indian produce. The under stratum is in some parts a yellow or brick clay, in others a stiff terrass, but the land is in most places very stony.

" In Dominica, it is said, there are two hundred coffee plantations, principally belonging to French planters, producing in a good year about four million pounds of coffee; and fifty sugar plantations, the average produce of which is estimated at three thousand hogsheads per annum. The general surface of the country is, however, unfavourable to the cultivation of sugar, and comparatively a very small portion of it is yet cleared of its wood. Roseau is a free port, but subject to restrictions which operate much to the discouragement of foreigners. There are some few wandering red Caribs in this island, but I did not accidentally meet with any of them. I was the more curious to do so, as their race is now nearly extinct; and I wished to ascertain the truth of the general opinion of the Americans, that their personal resemblance to the Indians of the northern continent is as striking as that of their customs and habits. A remnant of the Caribs (one of the bodies transported from St. Vincent's, and landed at Rattan island) is now near *Truxillo*, in the province of *Guatemala*, in South America. At first they suffered severely from sickness, but they gradually overcame the change of climate, and now supply the feeble Spaniards with recruits to garrison that province. Their total extinction is, however, near at hand, and a wretched destiny

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tiny perhaps awaits the islands of which we have deprived them. At present the strength and energy of a great nation, in its meridian, by the emanation of its population and power supports a forced and unnatural state of society; but when those energies shall cease to operate (for there is an inevitable change that awaits all sublunary states), and nature resumes her uncontrolled dominion, they probably will become inhabited by a mongrel race of people, under the influence of some superior power, and destitute of that generous and indomitable spirit which many of the American savages cherished in the wilderness of their woods; the vigorous forerunner of a dignified freedom, which probably would have attended their subsequent civilization. But one can hardly anticipate in the future history of a people the elevated character of freemen, where the prototype will be found in slavery, enervation, and the promiscuous intercourse of dissimilar nations." *

The account of the other British islands shall be given in the words of Mr. Edwards.

St. Christopher's.

"The island of St. Christopher was called by its ancient possessors the Caribs, Liamuiga, or the Fertile Island. It was discovered in November 1493, by Columbus himself, who was so pleased with its appearance, that he honoured it with his own christian name. But it was neither planted nor possessed by the Spaniards. It was, however (notwithstanding that the general opinion ascribes the honour of seniority to Barbadoes), the eldest of all the British territories in the West Indies, and, in truth, the common mother both of the English and French settlements in the Caribbean islands. The fact, as related by an historian, to whose industry and knowledge I have been so largely indebted in my account of St. Vincent, was this: 'In the number of those gentlemen who accompanied Captain Roger North, in a voyage to Surinam, was Mr. Thomas Warner, who making an acquaintance there with Captain Thomas Painton, a very experienced seaman, the latter suggested how much easier it would be to fix, and preserve in good order, a colony in one of the small islands despised and deserted by the Spaniards, than on that vast country the continent, where, for want of sufficient authority, all things were falling into confusion; and he parti-

* M'Kinnen's West Indies, p. 50.

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cularly pointed out for that purpose the island of St. Christopher. This gentleman dying, Mr. Warner returned to England in 1620, resolved to put his friend's project in execution. He accordingly associated himself with fourteen other persons, and with them took his passage on board a ship bound to Virginia. From thence he and his companions sailed for St. Christopher's, where they arrived in January 1623, and by the month of September following had raised a good crop of tobacco, which they proposed to make their staple commodity.' It has been shewn in a former chapter, that the first actual establishment in Barbadoes took place the latter end of 1624.

" By the generality of historians who have treated of the affairs of the West Indies, it is asserted that a party of the French, under the command of a person of the name of D'Esnambuc, took possession of one part of this island, on the same day that Mr. Warner landed on the other; but the truth is, that the first landing of Warner and his associates happened two years before the arrival of D'Esnambuc, who, it is admitted by Du Tertre, did not leave France until 1625. Unfortunately, the English settlers, in the latter end of 1623, had their plantations demolished by a dreadful hurricane, which put a sudden stop to their progress. In consequence of this calamity, Mr. Warner returned to England to implore succour; and it was on that occasion that he sought and obtained the powerful patronage and support of James Hay, Earl of Carlisle. This nobleman caused a ship to be fitted out, laden with all kinds of necessaries. It was called the Hopewell, and arrived at St. Christopher's on the 18th of May 1624; and thus he certainly preserved a settlement, which had otherwise died in its infancy. Warner himself did not return to St. Christopher's until the year following. He was then accompanied by a large body of recruits, and D'Esnambuc about the same time, perhaps the same day. This latter was the Captain of a French privateer; and, having in an engagement with a Spanish galleon of superior strength, been very roughly handled, he was obliged, after losing several of his men, to seek refuge in these islands. He brought with him to St. Christopher's about thirty hardy veterans, and they were cordially received by the English, who appear at this time to have been under some apprehensions of the Caribes. Hitherto Warner's first colony

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colony had lived on friendly terms with these poor savages, by whom they were liberally supplied with provisions; but having seized on their lands, the consciousness of deserving retaliation made the planters apprehensive of an attack, when probably none was intended. Du Tertre relates, that the French and English receiving information of a projected revolt, concurred in a scheme for seizing the conspirators beforehand. Accordingly they fell on the Caribs by night, and having murdered in cold blood from one hundred to one hundred and twenty of the stoutest, drove all the rest from the island, except such of the women as were young and handsome, of whom, says the reverend historian, they made concubines and slaves.* He adds, that such of the Caribs as escaped the massacre, having given the alarm to their countrymen in the neighbouring islands, a large body of them returned soon afterwards, breathing revenge; and now the conflict became serious. The Europeans, however, more from the superiority of their weapons, than of their valour, became conquerors in the end; but their triumph was dearly purchased, one hundred of their number having been left dead on the field of battle.

“After this exploit, which Du Tertre calls a glorious victory, the Caribs appear to have quitted altogether this and some of the small islands in the neighbourhood, and to have retired southwards. The two leaders, Warner and D’Esnambuc, about the same time, found it necessary to return to Europe for the purpose of soliciting succour from their respective nations; and bringing with them the name of conquerors, they severally met with all possible encouragement. Warner was knighted by his sovereign, and through the interest of his noble patron sent back as governor in 1626, with four hundred new recruits, amply supplied with necessaries of all kinds; while D’Esnambuc, under the patronage of Richlieu (the minister of France), projected the establishment of an exclusive company for trading to this and some of the other islands. That minister concurred with D’Esnambuc in opinion, that such an institution was best adapted to the purposes of commerce and colonization;—an erroneous conclusion which D’Esnambuc himself had

* Such is the account of a contemporary author, Pere Du Tertre, who relates these transactions with perfect composure, as founded on common usage, and not unwarrantable in their nature.

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soon abundant occasion to lament, for the French in general either misunderstood or disapproved the project. Subscriptions came in reluctantly, and the ships which the new company fitted out on this occasion were so wretchedly supplied with provisions and necessaries, that of five hundred and thirty-two recruits who sailed from France with D'Estnambuc, in February 1627, the greater part perished miserably at sea for want of food.

"The English received the survivors with compassion and kindness; and for preventing contests in future about their respective limits, the commanders of each nation agreed to divide the whole island pretty equally between their followers. A treaty of partition for this purpose was reduced to writing, and signed, with many formalities, on the 3d of May 1627: it comprehended also a league defensive and offensive; but this alliance proved of little avail against the Spanish invasion in 1629, the circumstances whereof I have elsewhere related. Yet surely, unjustifiable as that attack may be deemed, if the conduct of the new settlers towards the Caribs was such as Du Tertre relates, we have but little cause to lament over the miseries which befel them. The mind exults in the chastisement of cruelty, even when the instruments of vengeance are as criminal as the objects of punishment.

"It may now be thought that those of the two nations who survived so destructive a storm, had learned moderation and forbearance in the school of adversity; and indeed for some years they appear to have lived on terms of good neighbourhood with each other; but at length national rivalry and hereditary animosity were allowed their full influence, inasmuch, that for half a century afterwards, this little island exhibited a disgusting scene of internal contention, violence, and bloodshed. It is impossible at this time to pronounce with certainty, whether the French or the English were the first aggressors. It is probable that each nation would lay the blame on the other. We are told that in the first Dutch war, in the reign of Charles II. the French king declaring for the United States, his subjects in St. Christopher's, disdaining an inglorious neutrality, attacked the English planters, and drove them out of their possessions, which were afterwards, by the treaty of Breda, re-

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stored to them. In 1689, in consequence of the revolution which had taken place in England the preceding year, the French planters in this island, declaring themselves in the interests of the abdicated monarch, attacked and expelled their English neighbours a second time, laying waste their plantations, and committing such outrages as are unjustifiable among civilized nations, even in a time of open and avowed hostility. Their conduct on this occasion was deemed so cruel and treacherous, that it was assigned by King William and Queen Mary among the causes which induced them to declare war against the French nation. Even fortune herself, inclining at length to the side of justice, from henceforward deserted them; for, after they had continued about eight months sole masters of the island, the English, under the command of General Codrington, returning in great force, not only compelled the French inhabitants to surrender, but actually transported eight-hundred of them to Martinico and Hispaniola. It is true, that reparation was stipulated to be made them by the treaty of Ryfwick, in 1697; but war again breaking out between the two nations, in 1702, the French planters derived but little advantage from that clause in their favour. They had, however, in 1705, the gloomy satisfaction to behold many of the English possessions again laid waste by a French armament, which committed such ravages, that the British parliament found it necessary to distribute the sum of 103,000*l.* among the sufferers, to enable them to re-settle their plantations. Happily this was the last exertion of national enmity and civil discord within this little community; for, at the peace of Utrecht, the island was ceded wholly to the English, and the French possessions publicly sold for the benefit of the English government. In 1733, 80,000*l.* of the money was appropriated as a marriage portion with the princess Anne, who was betrothed to the Prince of Orange. Some few of the French planters, indeed, who consented to take the oaths, were naturalized, and permitted to retain their estates.

“ Such were the origin and progress of the British establishment in the island of St. Christopher. The circumstances which attended the French invasion in the beginning of 1782, when a garrison of less than one thousand effective men (including the militia,) was attacked by eight thousand

thousand of the best disciplined troops of France, supported by a fleet of thirty-two ships of war; the consequent surrender of the island, after a most vigorous and noble defence; and its restoration to Great Britain by the general peace of 1783, being within every person's recollection, need not be related at large in their work. I shall therefore conclude with the following particulars, which, I presume, are somewhat less familiar to the general reader, and their accuracy may be depended on.

" St. Christopher lies in $17^{\circ} 15'$ north latitude, and $63^{\circ} 17'$ west longitude; it is about fourteen leagues in circuit, and contains 43,726 acres of land, of which about 17,000 acres are appropriated to the growth of sugar, and 4,000 to pasturage. As sugar is the only commodity of any account that is raised, except provisions and a little cotton, it is probable, that nearly one half of the whole island is unfit for cultivation. The interior part of the country consists indeed of many rugged precipices, and barren mountains. Of these, the loftiest is Mount-Misery (evidently a decayed volcano), which rises 3,711 feet in perpendicular height from the sea. Nature, however, has made abundant amends for the sterility of the mountains, by the fertility she has bestowed upon the plains. No part of the West Indies that I have seen, possesses even the same species of soil that is found in St. Christopher's. It is in general a dark grey loam, so light and porous as to be penetrable by the slightest application of the hoe; and I conceive it to be the production of subterraneous fires, the black ferruginous pumice of naturalists, finely incorporated with a pure loam, or virgin mould. The under stratum is gravel, from eight to twelve inches deep. Clay is no where found, except at a considerable height in the mountains.

" By what process of nature the soil which I have mentioned becomes more especially suited to the production of sugar than any other in the West Indies, it is neither within my province nor ability to explain. The circumstance, however, is unquestionable. Canes, planted in particular spots, have been known to yield 8,000lbs. of Muscovado sugar from a single acre. One gentleman in a favourable season, made 6,400lbs. or four hogheads, of sixteen cwt. each, per acre, on an average return of his whole crop. It is not however pretended, that the greatest part,

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or even a very large proportion of the cane land, throughout the island, is equally productive. The general average produce for a series of years is 16,000 hogheads of sixteen cwt., which, as one-half only of the whole cane land, or 8,500 acres, is annually cut (the remainder being in young canes,) gives nearly two hogheads of sixteen cwt. per acre for the whole of the land in ripe canes; but even this is a prodigious return, not equalled, I imagine, by any other sugar country in any part of the globe. In Jamaica, though some of the choicest lands may yield in favourable years two hogheads of sixteen cwt. per acre; the cane land which is cut annually, taken together, does not yield above a fourth part as much.

"I am informed, however, that the planters of St. Christopher's are at a great expence for manure; that they never cut ratoon canes; and although there is no want in the country of springs and rivulets for the support of the inhabitants, their plantations suffer much in dry weather, as the substratum does not long retain moisture.

"This island is divided into nine parishes, and contains four towns and hamlets: viz. Basseterre (the present capital, as it was formerly that of the French, containing about 800 houses,) Sandy Point, Old Road, and Deep Bay. Of these the two first are ports of entry, established by law. The fortifications consist of Charles-Fort, and Brimstone-Hill, both near Sandy Point; three batteries at Basseterre, one at Fig-Tree Bay, another at Palmeto Point, and some smaller ones of no great importance.

"The proportion which St. Christopher's contributes, with other islands, towards an honourable provision for the governor-general, is 1,000*l.* currency *per annum*; which is settled on him by the assembly immediately on his arrival. He has besides some perquisites; and in time of war they are considerable.

"Each island within this government has a separate council, and each of them an assembly, or house of representatives. In St. Christopher's the council should consist of ten members, but it is seldom that more than seven are present. The house of assembly is composed of twenty-four representatives, of whom fifteen make a quorum. The requisite qualification

qualification is a freehold of forty acres of land, or a house worth forty pounds a year. Of the electors, the qualification is a freehold of ten pounds *per annum*. CARIBBEE ISLANDS.

"The governor of this, and the other islands in the same government, is chancellor by his office, and in St. Christopher's sits alone. Attempts have been made to join some of the council with him, as in Barbadoes, but hitherto without success, the inhabitants choosing rather to submit to the expence and delay of following the chancellor to Antigua, than to suffer the inconveniency of having on the chancery bench judges, some of whom, it is probable, from their situation and connections, may be interested in the event of every suit that may come before them.

"In this island, as in Jamaica, the jurisdiction of both the king's bench and common pleas, centers in one superior court, wherein justice is administered by a chief justice and four puisne judges. The chief is appointed by the crown, the others by the governor in the king's name, and they all hold their commissions during pleasure. The office of chief judge is worth about 600*l.* *per annum*. The emoluments of the assistant judges are trifling.

"The present number of white inhabitants is computed at 4,000, and taxes are levied on 26,000 negroes; and there are about three hundred blacks and mulattoes of free condition.

"As in the other British islands in the neighbourhood, all the white men from the age of sixteen to sixty are obliged to enlist in the militia, and in this island they serve without pay. They form two regiments of foot, although the whole number of effective men in each regiment seldom exceeds three hundred, but there is likewise a company of free blacks, and this, before the late war, constituted the whole of the military force within the island; the British government refusing to send them troops of any kind.

"Of the wisdom of such conduct in Great Britain, the reader will be able properly to judge, when he is told, that the natural strength of this island, from the conformation and inequalities of its surface, is such that a garrison of two thousand effective troops, properly supplied

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with ammunition and provisions, would in all human probability have rendered it impregnable to the formidable invasion of 1782.

" With St. Christopher's surrendered also the island of Nevis; from which it is divided only by a small channel, and of which I shall now give some account.

Nevis.

" This beautiful little spot is nothing more than a single mountain, rising like a cone in an easy ascent from the sea; the circumference of its base not exceeding eight English leagues. It is generally believed that Columbus bestowed on it the appellation of Nieves, or The Snows, from its resemblance to a mountain of the same name in Spain, the top of which is covered with snow; but it is not an improbable conjecture, that in those days a white smoke was seen to issue from the summit, which, at a distance, had a snow-like appearance, and that it rather derived its name from thence. That the island was produced by some volcanic explosion, there can be no doubt; for there is a hollow, or crater, near the summit, still visible, which contains a hot spring strongly impregnated with sulphur; and sulphur is frequently found in substance, in the neighbouring gullies and cavities of the earth.

" The country is well watered, and the land in general fertile, a small proportion towards the summit of the island excepted, which answers, however, for the growth of ground provisions, such as yams and other esculent vegetables. The soil is stony; the best is a loose black mould, on a clay. In some places the upper stratum is a stiff clay, which requires labour, but properly divided and pulverised, repays the labour bestowed upon it. The general production of sugar, (its only staple production,) is one hoghead of sixteen cwt. per acre from all the canes that are annually cut, which being about 4,000 acres, the return of the whole is an equal number of hogheads, and this was the average fixed on by the French government in 1782, as a rule for regulating the taxes. As at St. Christopher's the planters seldom cut ratoon canes.

" This island, small as it is, is divided into five parishes. It contains a town called Charles Town, the seat of government, and a port of entry, and there are two other shipping places, called Indian-Castle and

New-Castle.

New-Castle. The principal fortification is at Charles-Town, and is called Charles Fort. The commandant is appointed by the crown, but receives a salary from the island.

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"The government, in the absence of the governor-general, is administered by the president of the council. This board is composed of the president, and six other members. The house of assembly consists of fifteen representatives, three for each parish.

"The administration of common law is under the guidance of a chief justice, and two assistant judges, and there is an office for the registry of deeds.

"The present number of white inhabitants is stated to me not to exceed six hundred, while the negroes amount to about ten thousand; a disproportion which necessarily converts all such white as are not exempted by age or decrepitude, into a well-regulated militia, among which there is a troop consisting of fifty horse, well mounted and accoutred. English forces, on the British establishment they have none.

"The English first established themselves in this island, in the year 1628, under the protection and encouragement of Sir Thomas Warner. Among the different classes of men, who sought to improve their fortunes in St. Christopher's by the patronage of that enterprising leader, it can hardly be presumed that every individual experienced the full gratification of his hopes and expectations. In all societies, there are many who will consider themselves unjustly overlooked and forgotten. Of the companions of Warner's earliest voyages, it is probable that some would set too high a value on their services, and of those who ventured afterwards, many would complain on their arrival, that the best lands were pre-occupied. To soften and temper such discordancy and disquiet, by giving full employment to the turbulent and seditious, seems to have been one of the most important objects of Warner's policy. Motives of this nature induced him, without doubt, to plant a colony in Nevis at so early a period; and the wisdom and propriety of his first regulations gave strength and stability to the settlement.

"What Warner began wisely, was happily completed by his immediate successor Mr. Lake, under whose administration Nevis rose to opu-

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lence and importance. "He was a wise man," says Du Tertre, "and feared the Lord." Making this island the place of his residence, it flourished beyond example. It is said, that about the year 1640 it possessed four thousand whites: so powerfully are mankind invited by the advantages of a mild and equitable system of government! Will the reader pardon me if I observe at the same time, that few situations in life could have afforded greater felicity than that of such a governor. Living amidst the beauties of an eternal spring, beneath a sky serene and unclouded, and in a spot inexpressively beautiful, (for it is enlivened by a variety of the most enchanting prospects in the world, in the numerous islands which surround it,) but above all, happy in the reflection that he conciliated the differences, administered to the necessities, and augmented the comforts of thousands of fellow-creatures, all of whom looked up to him as their common father and protector. If there be pure joy on earth, it must have existed in the bosom of such a man; while he beheld the tribute of love, gratitude, and approbation, towards him in every countenance, and whose heart at the same time told him that he deserved it.

"I am sorry that I must present the reader with a very different picture, in the account that I am now to give of Antigua.

Antigua.

"Antigua is situated about twenty leagues to the eastward of St. Christopher's, and was discovered at the same time with that island, by Columbus himself, who named it, from a church in Seville, *Santa Maria de la Antigua*. We are informed by Ferdinand Columbus, that the Indian name was *Jamaica*. It is a singular circumstance, that this word, which, in the language of the larger islands, signified a country *abounding in springs*, should, in the dialect of the Caribs, have been applied to an island that has not a single spring or rivulet of fresh water in it.

"This inconvenience, without doubt, as it rendered the country uninhabitable to the Caribs, deterred for some time the European adventurers in the neighbouring islands from attempting a permanent establishment in Antigua; but nature presents few obstacles which the avarice or industry of civilized man will not endeavour to surmount. The lands were found to be fertile, and it was discovered that cisterns might
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be contrived to hold rain-water. So early as 1632, a few English families took up lands there, and began the cultivation of tobacco. Among these was a son of Sir Thomas Warner, whose descendants still possess very considerable property in the island, one of them (Ashton Warner, Esq.) having been, in 1787, president of the council, and commander in chief, in the absence of the governor.

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" But the settlement was nearly strangled in its infancy. In 1666, a French armament from Martinico, co-operating with a body of Caribs, invaded the island, and ravaged the country with fire and sword. All the negroes that could be found, were taken away; and the inhabitants, after beholding their houses and estates in flames, were plundered even to the clothes on their backs, and the shoes on their feet, without regard to sex or age.

" Its recovery from this calamity was owing chiefly to the enterprising spirit and extensive views of Colonel Codrington of Barbadoes. This gentleman removing to Antigua, about the year 1674, applied his knowledge in sugar planting with such good effect and success, that others, animated by his example, and assisted by his advice and encouragement, adventured in the same line of cultivation. Mr. Codrington was some years afterwards nominated Captain-General and Commander in Chief of all the Leeward Caribbean Islands; and, deriving from this appointment, the power of giving greater energy to his benevolent purposes, had soon the happiness of beholding the good effects of his humanity and wisdom, in the flourishing condition of the several islands under his government.

" The prosperity of Antigua was manifested in its extensive population; for when, in the year 1690, General Codrington commanded on the expedition against the French inhabitants of St. Christopher's, as hath been related in the history of that island, Antigua furnished towards it no less than eight hundred effective men: a quota which gives room to estimate the whole number of its white inhabitants at that time, at upwards of five thousand.

" Mr. Codrington dying in 1698, was succeeded in his government by his son Christopher, a gentleman eminently distinguished for his attainments in polite literature; and who, treading in the same paths as his illustrious father, gave the people under his government the promise

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of a long continuance of felicity. His administration, however, terminated at the end of six years; for, in 1704, he was superseded (I know not on what account) by Sir William Mathews; who, dying soon after his arrival, the Queen was pleased to appoint to the government of this and the neighbouring island, Daniel Park, Esq. a man, whose tragical end, having excited the attention of Europe, and furnished a lesson for history to perpetuate, I shall be excused for entering somewhat at large into his conduct and fortune.

" Mr. Park was a native of Virginia, and was distinguished for his successes at a very early time of life. Having married a lady of fortune in America, his first exploit was to rob his wife of her money, and then desert her. With this money he came to England, and obtained a return to parliament; but gross bribery being proved against him, he was expelled the House. His next adventure was to debauch the wife of a friend, for which being prosecuted, he quitted England, and made a campaign with the army in Flanders, where he had the fortune to attract the notice, and acquire the patronage of the Duke of Marlborough.—In 1704, he attended the Duke as one of his aids-de-camp, and as such, on the event of the battle of Hochstet, having been sent by his Grace to England, with intelligence of that important victory, he was rewarded by the Queen with a purse of a thousand guineas, and her picture richly set with diamonds. The year following, the government of the Leeward Islands becoming vacant, Mr. Park, through the interest of his noble patron, was appointed to succeed Sir William Mathews therein; and he arrived at Antigua in July 1706.

" As he was a native of America, and his interest with the British administration was believed to be considerable, the inhabitants of the Leeward Islands, who were probably unacquainted with his private character, received him with singular respect, and the assembly of Antigua, even contrary to a royal instruction, added a thousand pounds to his yearly income, in order, as it was expressed in the vote, to relieve him from the expence of house-rent; a provision which, I believe, has been continued ever since to his successors in the government.

" The return which Mr. Park thought proper to make for this mark of their kindness, was an avowed and unrestrained violation of all decency

gency and principle. He feared neither God nor man ; and it was soon observed of him, as it had formerly been of another detestable tyrant, that he spared no man in his anger, nor woman in his lust. One of his first enormities was, to debauch the wife of a Mr. Chester, who was factor to the Royal African Company, and the most considerable merchant in the island. Apprehending that the injured husband might meditate revenge, the worthy governor endeavoured to be beforehand with him, by adding the crime of murder to that of adultery ; for Chester having about this time had the misfortune to kill a person by accident, his excellency, who had raised a common soldier to the office of provost-marshal, brought him to a trial for his life ; directing his instrument, the provost-marshal, to impanel a jury of certain persons, from whom he doubted not to obtain Chester's conviction ; and the execution of this innocent and injured man would undoubtedly have followed, if the evidence in his favour had not proved too powerful to be overborne ; so that the jury were compelled to pronounce his acquittal.

" Another of his exploits, was an attempt to rob the Codrington family of the island of Barbadoes, (of which they had held peaceable possession for thirty-years), by calling on them to prove their title before himself and his council ; a measure which gave every proprietor reason to apprehend, that he had no security for his possessions but the governor's forbearance.

" He declared, that he would suffer no provost-marshal to act, who should not at all times summon such juries as he should direct. He changed the mode of electing members to serve in the assembly, in order to exclude persons he did not like ; and not being able, by this measure, to procure an assembly to his wish, he refused to call them together, even when the French threatened an invasion.

" He entered the house of Mr. Chester, the person before mentioned, with an armed force, and seized several gentlemen, (some of them the principal men in the island) who were there met for the purpose of good fellowship, on suspicion that they were concerting measures against himself ; most of whom he sent, by his own authority, to the common jail, and kept them there without bail or trial.

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" By these, and a thousand other odious and intemperate proceedings, the whole country became a party against him, and dispatched an agent to England to lay their grievances before the Crown, adopting, in the first instance, all moderate and legal means to procure his removal; but from the delays incident to the business, the people lost all temper, and began to consider forbearance as no longer a virtue. More than one attempt was made on the governor's life, in the last of which he was grievously, but not mortally, wounded. Unhappily the furious and exasperated state of men's minds admitted of no compromise, and the rash impetuous governor was not of a disposition to soften or conciliate, if occasion had offered.

" At length, however, instructions came from the Crown, directing Mr. Park to resign his command to the Lieutenant-Governor, and return to England by the first convenient opportunity; at the same time, commissioners were appointed to take examinations on the spot, concerning the complaints which had been urged against his conduct. It would have been happy if the inhabitants of Antigua had borne their success with moderation; but the triumphant joy which they manifested on receipt of the Queen's orders, provoked the governor into desperation. He declared that he would continue in the government in spite of the inhabitants; and being informed, that a ship was about to sail for Europe, in which he might conveniently have embarked, he refused to leave the country. In the meanwhile, to convince the people that his firmness was unabated, and that he still considered himself in the rightful exercise of his authority, he issued a proclamation to dissolve the assembly.

" Matters were now coming fast to an issue. The assembly continued sitting notwithstanding the governor's proclamation, and resolved, that having been recalled by his sovereign, his continuance in the government was usurpation and tyranny, and that it was their duty to take charge of the safety and peace of the island. On hearing of this vote, the governor secretly ordered a party of soldiers to surround them; but the assembly having obtained information of his intentions, immediately separated to provide for their personal safety. The ensuing night, and the whole

whole of the following day, were employed in summoning the inhabitants from all parts of the island, to hasten to the capital, properly armed, to protect their representatives. It was given out, however, that the governor's life was not aimed at; all that was intended, was to secure his person, and send him from the island.

"On Thursday the 7th of December 1710, early in the morning, about five hundred men, appeared in arms, in the town of St. John's, where Colonel Park had been making provision for resistance in case of attack. He had converted the government house into a garrison, and stationed in it all the regular troops that were in the island. On the approach of the inhabitants however, his courage deserted him. The sight of an injured people, coming forward as one man, with deliberate valour, to execute on his person that punishment which he must have been conscious his enormities well merited, overwhelmed him with confusion and terror. Although he must have been apprized, that his adversaries had proceeded too far to retreat, he now, for the first time, when it was too late, had recourse to concession. He dispatched the provost-marshal with a message, signifying his readiness to meet the assembly at Parham, and to consent to whatever laws they should think proper to pass for the good of the country. He offered, at the same time, to dismiss his soldiers, provided six of the principal inhabitants would remain with him as hostages for the safety of his person. The speaker of the assembly, and one of the members of the council, unwilling to carry matters to the last extremity, seemed inclined to a compromise, and proposed themselves as two of the hostages required by the governor; but the general body of the people, apprehensive that further delay might be fatal to their cause, called aloud for immediate vengeance; and instantly marched forward in two divisions. One of these led by Mr. Piggot, a member of the assembly, taking possession of an eminence, that commanded the government house, attacked it with great fury. The fire was briskly returned for a considerable time, but at length the assailants broke into the house. The governor met them with firmness, and shot Piggot dead with his own hand, but received in the same moment, a wound which laid him prostrate. His attendants, seeing him fall, threw down their arms, and the enraged populace, seizing

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ing the person of the wretched governor, who was still alive, tore him into a thousand pieces, and scattered his reeking limbs in the street. Besides the governor, an ensign, and thirteen private soldiers, who fought in his cause, were killed outright, and a lieutenant, and twenty-four privates, wounded. Of the people, thirty-two were killed and wounded besides Mr. Piggot. The governor's death instantly put an end to this bloody conflict.

" Thus perished, in a general insurrection of an insulted and indignant community, a brutal and licentious despot, than whom no state criminal was ever more deservedly punished. He was a monster in wickedness, and being placed, by his situation, beyond the reach of ordinary restraint, it was lawful to cut him off by every means possible, as it would have been to shoot a wild beast that had broke its limits, and was gorging itself with human blood. 'The people of England,' says an eminent writer, 'heard with astonishment of Park's untimely fate; but the public were divided in their sentiments; some looking upon his death as an act of rebellion against the crown, and others considering it as a sacrifice to liberty. The flagrancy of the perpetration, and compassion for the man, at last got the better.' In the latter assertion, however, the writer is clearly mistaken, for the English government, after full investigation, was so thoroughly satisfied of Mr. Park's misconduct, as to issue, much to its honour, a general pardon of all persons concerned in his death, and two of the principal actors therein were even promoted some time afterwards to seats in the council.

" From this period, I close my account of the civil concerns of Antigua, finding no occurrence in its subsequent history of sufficient importance to detain the reader; what remains therefore is chiefly topographical, and I hope will be found correct.

" Antigua is upwards of fifty miles in circumference, and contains 59,838 acres of land, of which about 34,000 are appropriated to the growth of sugar, and pasturage annexed: its other principal staples are cotton-wool and tobacco; to what extent of cultivation, I am not informed; and they raise in favourable years great quantities of provisions.

" This island contains two different kinds of soil; the one a black mould, on a substratum of clay, which is naturally rich, and when not checked

checked by excessive droughts, to which Antigua is particularly subject, very productive. The other is a stiff clay, or substratum of marl. It is much less fertile than the former, and abounds with an irradicable kind of grass, in such a manner, that many estates consisting of that kind of soil, which were once very profitable, are now so impoverished, and overgrown with this sort of grass, as either to be converted into pasture land, or to become entirely abandoned. Exclusive of such deserted land, and a small part of the country that is altogether unimprovable, every part of the island may be said to be under cultivation.

"From the circumstances that have been related, it is difficult to furnish an average return of the crops, which vary to so great a degree, that the quantity of sugar exported from this island in some years, is five times greater than in others; thus, in 1779, were shipped 3,382 hogheads, and 579 tierces; in 1782, the crop was 15,102 hogheads, and 1,603 tierces; and in the years 1770, 1773, and 1778, there were no crops of any kind; all the canes being destroyed by a long continuance of dry weather, and the whole body of the negroes must have perished for want of food, if American vessels with corn and flour had been at that time, as they are now, denied admittance.

"It seems to me, on the whole, that the island has progressively decreased both in produce and white population. The last accurate returns to government were, in 1774. In that year, the white inhabitants of all ages and sexes were 2,590, and the enslaved negroes 37,808; and, I believe, that 17,000 hogheads of sugar of sixteen hundred weight are reckoned a good saving crop. This, as one half of the canes only are cut annually, is about a hoghead of sugar *per* acre for each acre that is cut. The produce of 1787, will be given hereafter; and, I believe, it was a year more favourable to Antigua, in proportion to its extent, than to any other of the British islands in the West Indies.

"Antigua is divided into six parishes, and eleven districts, and contains six towns and villages. Saint John's, (the capital), Parham, Falmouth, Willoughby Bay, Old Road, and James Fort; of which the two first are legal ports of entry. No island in this part of the West Indies, can boast of so many excellent harbours. Of these, the principal

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principal are English Harbour and Saint John's, both well fortified, and at the former, the British government has established a royal navy yard and arsenal, and conveniences for careening ships of war.

"The military establishment generally consists of two regiments of infantry, and two of foot militia. There are likewise a squadron of dragoons, and a battalion of artillery, both raised in the island, and the regulars receive additional pay, as in Jamaica.

"It hath been already observed, that the governor, or captain-general of the Leeward Caribbean Islands, although directed by his instructions, to visit occasionally each island within his government, is generally stationary at Antigua: he is chancellor of each island by his office, but commonly holds the court in Antigua, and in hearing and determining causes from the other islands, presides alone. In causes arising in Antigua, he is assisted by his council, after the practice of Barbadoes; and, by an act of the assembly of this island, confirmed by the Crown, the president, and a certain number of the council, may determine Chancery causes during the absence of the governor-general. The other courts of this island are, a court of King's-bench, a court of Common-pleas, and a Court of Exchequer.

"The legislature of Antigua, is composed of the commander in chief, a council of twelve members, and an assembly of twenty-five, and it is very much to its honour, that it presented the first example to the sister islands, of a melioration of the criminal law respecting negro slaves, by giving the accused party the benefit of a trial by jury: and allowing in the case of capital convictions, four days between the time of sentence and execution. And it is still more to the honour of Antigua, that its inhabitants have encouraged, in a particular manner, the laudable endeavours of certain pious men, who have undertaken, from the purest and best motives, to enlighten the minds of the negroes, and lead them into the knowledge of religious truth. In the report of the Lords of the Committee of Council on the Slave-trade, is an account of the labours of the society, known by the name of the *Unitas Fratrum*, (commonly called *Moravians*;) in this truly glorious pursuit; from which it appears that their conduct in this business displays such sound judgment, breathes such a spirit of genuine Christianity, and has been attended with such
eminent

eminent success, as to entitle its brethren and missionaries to the most favourable reception, from every man whom the accidents of fortune have invested with power over the poor Africans; and who believes (as I hope every planter believes) that they are his fellow creatures, and of equal importance with himself in the eyes of an all-seeing and impartial governor of the universe.

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"Of Montserrat, neither the extent nor the importance demands a very copious discussion. It was discovered at the same time with St. Christopher's, and derived its name from a supposed resemblance which Columbus perceived in the face of the country, to a mountain of the same name near Barcelona.

Montserrat.

"The name was all that was bestowed upon it by the Spaniards. Like Nevis, it was first planted by a small colony from St. Christopher's, detached in 1632 from the adventurers under Warner. Their separation appears indeed to have been partly occasioned by local attachments and religious dissensions, which rendered their situation in St. Christopher's uneasy, being chiefly natives of Ireland, of the Romish persuasion. The same causes, however, operated to the augmentation of their numbers; for so many persons of the same country and religion adventured thither soon after the first settlement, as to create a white population, which it has ever since possessed; if it be true as asserted by Oldmixon, that at the end of sixteen years there were in the island upwards of one thousand white families, constituting a militia of three hundred and sixty effective men.

"The civil history of this little island contains nothing very remarkable. It was invaded by a French force in 1712, and suffered so much from the depredations of that armament, that an article was inserted in the treaty of Utrecht, for appointing commissioners to enquire into the damages, which, however, were not made good to the sufferers. It was again invaded, and with most of the other islands captured by the French in the late war, and was restored with the rest.

"Nothing therefore remains but to furnish the reader with an account of its present state in respect of cultivation, productions, and exports.

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" Montserrat is about three leagues in length, and as many in breadth, and is supposed to contain about thirty thousand acres of land, of which almost two-thirds are very mountainous, or very barren. The land in cultivation is appropriated nearly as follows: in sugar, six thousand acres; in cotton, provisions, and pasturage, two thousand each. None other of the tropical staples are raised. Its average crops from 1784 to 1788, were 2737 hogheads of sugar of sixteen hundred weight, 1107 puncheons of rum, 275 bales of cotton. The exports of 1787, and their value at the London market, will be seen in a table annexed to this chapter. They are produced by the labour of one thousand three hundred whites, and about ten thousand negroes.

" The government is administered in this, as in the other islands, by a legislature of its own, under the captain general. The council consists of six members, and the assembly of eight, two from each of the four districts into which it is divided; and the proportion which Montserrat contributes to the salary of the captain general is 400*l.* *per annum.*

Virgin
Islands.

" Of the Virgin Islands I have so few particulars to communicate, that I fear the reader will accuse me of inattention or idleness in my researches. I have, however, solicited information of those who I thought were most likely to afford it; but if my enquiries were not slighted, my expectations were not gratified. Even in a late historical account by Mr. Suckling, the chief justice of these islands, I find but little of which I can avail myself. It furnishes no particulars concerning their extent, their cultivation, or their commerce. It is silent as to the number of their present English inhabitants. The author is even misinformed as to the origin of their present name; for he supposes that it was bestowed upon them in 1580 by Sir Francis Drake, in honour of Queen Elizabeth; but the fact is, that these islands were named Las Virgines by Columbus himself, who discovered them in 1493, and gave them this appellation in allusion to the well-known legend in the Romish ritual of the 11,000 virgins.

" The Spaniards of those days, however, thought them unworthy of further notice. A century afterwards (1596) they were visited by the

the earl of Cumberland, in his way to the attack of Porto Rico; and the historian of that voyage, whose narrative is preserved in Hakluyt's collection, calls them "a knot of little islands wholly uninhabited, sandy, barren, and craggy." The whole group may comprehend about forty islands, islets, and keys, and they are divided at present between the English, the Spaniards, and Danes. The English hold Tortola, and Virgin Gorda, Jofvan Dykes, Guana Isle, Beef and Thatch Islands, Aneгада, Nichar, Prickly Pear, Camana's, Ginger, Cooper's, Salt Island, Peter's Island, and several others of little value. The Danes possess Santa Cruz, St. Thomas, with about twelve smaller islands dependant thereon, and St. John, which last is of importance, as having the best harbour of any island to the leeward of Antigua, and the Spaniards claim Crab Island, the Green or Serpent Island, the Tropic Keys, and Great and Little Passage.

"The first possessors of such of these islands as now belong to the British government, were a party of Dutch buccaneers who fixed themselves at Tortola about the year 1648, and built a fort there for their protection. In 1666 they were driven out by a stronger party of the same adventurers, who calling themselves English, pretended to take possession for the crown of England; and the English monarch, if he did not commission the enterprize, made no scruple to claim the benefit of it, for Tortola and its dependencies were soon afterwards annexed to the Leeward Island government, in a commission granted by King Charles II. to Sir William Stapleton, and I believe that the English title has remained unimpeached from that time to this.

"The Dutch had made but little progress in cultivating the country when they were expelled from Tortola; and the chief merit of its subsequent improvements was reserved for some English settlers from the little island of Anguilla, who, about a century past, embarked with their families and settled in the Virgin Islands. Their wants were few, and their government simple and unexpensive. The deputy governor, with a council nominated from among themselves, exercised both the legislative and judicial authority, determining, in a summary manner, all questions between subject and subject; and as to taxes, there seem to

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have been none laid: when money was absolutely necessary for public use, it was raised I believe by voluntary contribution.

" Under such a system, it was impossible that the colony could attain to much importance. It wanted the advantage of English capitals; but credit is sparingly given where payment cannot easily be enforced. The inhabitants, therefore, whose numbers in 1756 amounted to 1263 whites, and 6121 blacks, reasonably hoped to be put on the same footing with the islands, by the establishment of a perfect civil government, and constitutional courts of justice among them; but in this expectation they were not gratified until the year 1773. In that year, they presented an humble petition to the captain-general of the Leeward Island government, requesting his excellency to unite with them in an application to his Majesty, for permission to elect an assembly of representatives out of the freeholders and planters, in order that such assembly, with the governor and council, might frame proper laws for their peace, welfare, and good government; *pledging themselves, in that case, to grant to his Majesty, his heirs and successors, an impost of four and a half per centum, in specie, upon all goods and commodities the growth of these islands, similar to that which was paid in the other Leeward Islands.*

" Their application (thus sweetened) proved successful. It was signified to them that his Majesty, fully considering the persons, circumstances, and condition of his said Virgin Islands, and the necessity there was, from the then state of their culture and inhabitancy, that some adequate and perfect form of civil government should be established therein; 'and finally trusting that his faithful subjects in his said Virgin Islands, who should compose the new assembly, would, as the first act of legislation, cheerfully make good the engagement of granting to his Majesty, his heirs and successors, the impost of four and a half per centum on all the produce of the Virgin Islands, to be raised and paid in the same manner as the four and a half per centum is made payable in the other Leeward Islands,' did cause his royal pleasure to be signified to the governor in chief, that he should issue writs in his Majesty's name, for convening an assembly or house of representatives, who, together with

with a council, to be composed of twelve persons, to be appointed by the governor for that purpose, might frame and pass such laws as should be necessary for the welfare and good government of the said islands. CARIBBEAN ISLANDS.

"Accordingly, on the 30th of November 1773, the governor in chief of the Leeward Islands, in obedience to his Majesty's orders, issued a proclamation for convening an assembly or house of representatives of the Virgin Islands, who met on the 1st of February following, and very honourably complied with their engagement to the crown; the very first act passed by them being the grant before mentioned of four and a half per centum on the produce of the colony for ever. They afterwards passed a grant of 400*l.* currency per annum, as their proportion towards the salary of the governor-general.

"Such was the price at which the Virgin Islands purchased the establishment of a constitutional legislature. If it be difficult to reconcile this precedent with the doctrines which have been maintained in the case of Grenada, it may perhaps be said (as I believe the fact was) that the inhabitants of these islands were unapprised of the rights which they inherited as British subjects; when they voluntarily proposed to subject themselves and their posterity to the tax in question for permission to enjoy them; and their posterity may perhaps dispute the authority which their forefathers exercised on this occasion.

"The chief, and almost the only staple productions of these islands, are sugar and cotton. Of the quantity of land appropriated to the cultivation of either I have no account, nor can I venture even to guess at the quantity of unimproved land which may yet be brought into cultivation: Tortola itself is not more than fifteen miles long, and six miles broad: the exports of 1787 will presently be given, and I have only to add, that they were raised by the labour of about one thousand two hundred whites, and nine thousand blacks."*

Dr. Anderson, of St. Vincent's, has given the following account of a remarkable phenomenon in the Isle of Trinidad:—

"A most remarkable production of nature in the island of Trinidad Trinidad is a bituminous lake, or rather plain, known by the name of Tar Lake,

* Edwards's History of the West Indies, vol. i. book iii. chap. iv. p. 454.

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by the French called La Brea, from the resemblance to and answering the intention of ship pitch. It lies in the leeward side of the island, about half way from the Bocas to the south end, where the mangrove swamps are interrupted by the sand-banks and hills, and on a point of land which extends into the sea about two miles, exactly opposite to the high mountains of Páia on the north side of the gulf.

"The cape, or headland, is about fifty feet above the level of the sea, and is the greatest elevation of land on this side of the island. From the sea it appears a mass of black vitrified rocks; but on a close examination it is found a composition of bituminous scoriz, vitrified sand, and earth, cemented together: in some parts beds of cinders only are found. In approaching this cape there is a strong sulphureous smell, sometimes disagreeable. This smell is prevalent in many parts of the ground to the distance of eight or ten miles from it.

"This point of land is about two miles broad, and on the east and west sides, from the distance of about half a mile from the sea, falls with a gentle declivity to it, and is joined to the main land on the south by the continuation of the mangrove swamps, so that the bituminous plain is on the highest part of it, and only separated from the sea by a margin of wood which surrounds it, and prevents a distant prospect of it. Its situation is similar to a savannah, and like them, it is not seen till treading upon its verge. Its colour and even surface present at first the aspect of a lake of water, but it is possible it got the appellation of lake when seen in the hot and dry weather, at which time its surface, to the depth of an inch, is liquid, and then, from its cohesive quality, it cannot be walked upon.

"It is of a circular form, about three miles in circumference. At my first approach it appeared a plain as smooth as glass, excepting some small clumps of shrubs and dwarf trees that had taken possession of some spots of it; but when I had proceeded some yards on it, I found it divided into areolæ of different sizes and shapes; the chasms or divisions anastomosed through every part of it; the surface of the areolæ is perfectly horizontal and smooth; the margins undulated, each undulation enlarged to the bottom till they join the opposite. On the surface, the

margin or first indulation is distant from the opposite from four to six feet, and the same depth before they coalesce; but where the angles of the areolæ oppose, the chasms or ramifications are wider and deeper. When I was at it all these chasms were full of water, the whole forming one true horizontal plane, which rendered my investigation of it difficult and tedious, being necessitated to plunge into the water a great depth in passing from one areola to another. The truest idea that can be formed of its surface will be from the areolæ and their ramifications on the back of a turtle. Its more common consistence and appearance is that of pit-coal, the colour rather greyer. It breaks into small fragments, of a cellular appearance, and glossy, with a number of minute and shining particles interspersed through its substance; it is very friable, and, when liquid, is of a jet black colour. Some parts of the surface are covered with a thin and brittle scoria, a little elevated.

"As to its depth I can form no idea of it, for in no part could I find a substratum of any other substance: in some parts I found calcined earth mixed with it.

"Although I smelled sulphur very strong on passing over many parts of it, I could discover no appearance of it, or any rent or crack through which the steams might issue; probably it was from some parts of the adjacent woods: for although sulphur is the basis of this bituminous matter, yet the smells are very different and easily distinguished, for its smell comes the nearest to that of pitch of any thing I know. I could make no impression on its surface without an axe: at the depth of a foot I found it a little softer, with an oily appearance, in small cells. A little of it held to a burning candle makes a hissing or crackling noise, like nitre, emitting small sparks, with a vivid flame, which extinguish the moment the candle is removed. A piece put in the fire will boil up a long time without suffering much diminution: after a long time's severe heat, the surface will burn, and form a thin scoria, under which the rest remains liquid. Heat seems not to render it fluid, or occupy a larger space than when cold; from which I imagine there is but little alteration on it during the dry months, as the solar rays cannot exert their force above an inch below the surface. I was told by one French-

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man, that in the dry season all was one uniform smooth mass; and by another, that the ravins contained water fit for use during the year. But neither can I believe: for if, according to the first assertion, it was an homogeneous mass, something more than an external cause must affect it to give it the present appearances; nor without some hidden cause can the second be granted. Although the bottoms of these ramified channels admit not of absorption, yet from their open exposure, and the black surface of the circumjacent parts, evaporation must go on amazingly quick, and a short time of dry weather must soon empty them; nor from the situation and structure of the place is there a possibility of supply but from the clouds. To shew that the progress of evaporation is inconceivably quick here, at the time I visited it there were, on an average, two-thirds of the time incessant torrents of rain; but from the afternoon being dry, with a gentle breeze (as is generally the case during the rainy season in this island), there evidently was an equilibrium between the rain and the evaporation; for in the course of three days I saw it twice, and perceived no alteration in the height of the water, nor any outlet for it but by evaporation.

"I take this bituminous substance to be the bitumen asphaltum Linnaei. A gentle heat renders it ductile; hence mixed with a little grease, or common pitch, it is much used for the bottoms of ships, and for which intention it is collected by many; and I should conceive it a preservative against the borer, so destructive to ships in this part of the world.

"Besides this place where it is found in this solid state, it is found liquid in many parts of the woods; and at the distance of twenty miles from this, about two inches thick, in round holes of three or four inches diameter, and often at cracks or rents. This is consequently liquid, and smells stronger of tar than when indurated, and adheres strongly to any thing it touches: grease is the only thing that will divest the hands of it.

"The soil in general, for some distance round La Bray, is cinders and burnt earth; and where not so, it is a strong argillaceous soil; the whole exceedingly fertile, which is always the case where there are any

fulphureous particles in it. Every part of the country to the distance of thirty miles round has every appearance of being formed by convulsions of nature from subterraneous fires. In several parts of the woods are hot springs; some I tried with a well-graduated thermometer of Fahrenheit were 20° and 22° hotter than the atmosphere at the time of trial. From its position to them this part of the island has certainly experienced the effects of the volcanic eruptions, which have heaped up those prodigious masses of mountains that terminate the province of Paria on the north; and no doubt there has been, and still probably is, a communication between them. One of these mountains opposite to La Bray in Trinidad about thirty miles distant has every appearance of a volcanic mountain: however, the volcanic efforts have been very weak here, as no traces of them extend above two miles from the sea in this part of the island, and the greater part of it has had its origin from a very different cause to that of volcanos; but they certainly have laid the foundation of it, as is evident from the high ridge of mountains which surrounds its windward side to protect it from the depredations of the ocean, and is its only barrier against that overpowering element, and may properly be called the skeleton of the island.

"From every examination I have made, I find the whole island formed of an argillaceous earth, either in its primitive state, or under its different metamorphoses. The bases of the mountains are composed of schistus argillaceus and talcum lithomarga; but the plains or lowlands remaining nearly in the same moist state as at its formation, the component particles have not experienced the vicissitudes of nature so much as the more elevated parts, consequently retain more of their primitive forms and properties. As argillaceous earth is formed from the sediment of the ocean, from the situation of Trinidad to the continent its formation is easily accounted for, granting first the formation of the ridge of mountains that bound its windward side, and the high mountains on the continent that nearly join it: for the great influx of currents into the gulf of Paria from the coasts of Brazil and Andalusia must bring a vast quantity of light earthy particles from the mouth of the numerous large rivers which traverse these parts of the continent: but the currents being repelled by these ridges of mountains, eddies and smooth water

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will be produced where they meet and oppose; and, therefore, the earthy particles would subside and form banks of mud, and by fresh accumulations added would soon form dry land; and from these causes it is evident such a tract of country as Trinidad must be formed. But these causes still exist, and the effect from them is evident; for the island is daily growing on the leeward side, as may be seen from the mud-beds that extend a great way into the gulf, and there constantly increase. But from the great influx from the ocean at the south end of the island, and its egress to the Atlantic again through the Bocas, a channel must ever exist between the continent and Trinidad."

French Isles.

The French settlements of Guadeloupe and Martinique are of considerable importance, these islands being of larger size than any others of the Caribbees. Guadeloupe is of a remarkable form, being divided into two parts by a narrow channel, only navigable by boats. The well known products of these islands are sugar, cotton, indigo, ginger, and various fruits. Martinique is also celebrated for a distillery of liqueurs. The town of St. Pierre is about two miles in length, and half a mile in breadth, being handsomely built with stone; and some of the shops are as brilliant as any in London or Paris.

Martinique.

After a residence of some years in Martinique, M. Thibault de Chanvalon published an account of this island, chiefly containing meteorological observations, mingled, however, with other authentic information.* He observes, that there are, in appearance, only two seasons in the West Indies; what is called the winter, properly the rainy season, extending from the middle of July to the middle of October.

The French islands are in general considered as divided into two regions; the eastern part, exposed to the trade winds, being called *Cabesterre*; while the western or leeward is termed *Basse-terre*.

There are in Martinique only three mountains of considerable height, the highest being that called *Pelée* in the western part of the island, and bearing many marks of being an extinct volcano. *Vauclin*, the next, is

* *Voyage à la Martinique. Paris, 1763, quarto.*

of far inferior elevation, and almost entirely covered with coffee plantations. The inferior chains branch out in all directions. The lands in the neighbourhood of Mount Pelée seem, in the opinion of our author, to consist chiefly of pumice, either in lumps or powder, as are most of those on the north and west. In riding over these grounds, they resound as if hollow, a circumstance which also occurs in the wide volcanic tracts of the Andes. In the south of the island the soil is greatly variegated. The pumice lands soon imbibe the rain; but where there are woods, the climate becomes unhealthy from the humidity; and in most climates the neighbourhood of trees is pernicious to health.

Quarries of free-stone are rare at Martinique, and blocks of lava are used. Lime was made with the madrepons and sea shells. No mines had been discovered, but a ferruginous sand, often a volcanic production, had been observed on the shore near Mount Pelée.

The chief river seems to be that called the Galion, in the north-eastern part of the island.

The inhabitants are Whites, Caribs, and Negroes. Our author's character of the former approaches to that of our West Indians, generally thoughtless, lively, precipitate, and self-willed; but at the same time frank, brave, and generous.

"The ladies of the French West Indies unite with extreme indolence great vivacity and impatience. Proud, decisive, and extremely self-willed like the men; they are almost as sensible as the other sex in points of honour connected with courage. A woman would think herself dishonoured, if the courage of her husband were suspected. It is difficult to reconcile their generous and compassionate character with their extreme severity towards their servants, in which they even surpass the men. Their hearts are made for love, which is easily kindled, but among the triumphs of that passion cannot be counted that over their indolence. They love tenderly without occupying themselves in the means of seduction, whether it be that the labour would be too great, or that they regard these means as refinements of coquetry, more proper to change love than to adorn it. Though their attachment to their husbands be strong, yet his death soon gives happiness to another. There are few widows who, in spite of their tenderness for their chil-

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dren, do not speedily efface by a second marriage the name and remembrance of a man to whom they seemed eagerly attached. Yet they are rarely unfaithful, the purity of their manners being either maintained by their own virtue, or by the difficulty of concealing their irregularities in a country where the manner of life is not reconcileable with the precautions of gallantry. Nor must their pride be omitted, nor even their indolence, sometimes a mother of virtues as well as of vices, nor above all their want of temptation, as the men are greatly attached to the negroes. It may, however, be believed that their fidelity is accompanied with extreme jealousy. While the men regard the colonies as merely temporary occasions of emolument, and bend all their thoughts and desires towards the parent country, the women naturally sedentary, and averse to fatigues and the sea, prefer their habitual islands, and allow their husbands to pass alone into Europe. Indolence, and the loss of a certain rank, may also concur to this aversion for the parent country. Unaccustomed to large societies they are generally timid, and the want of emulation occasions the neglect of their own talents. The dance, the favourite amusement of a sex created for pleasure, can alone overcome their indolence, and in this exercise they seem absolutely indefatigable."

There are no Caribs in Martinique, but some at Guadaloupe; and they are chiefly found in the English island of St. Vincent. An account of their manners has already been given. M. Chanvalon in vain attempts to account for a singular usage among them, that of reposing for some time after the child-birth of their wives. It is now known to originate in a popular superstition, that if the father were to receive even a slight hurt, it might be fatal to the infant, and he continues in bed as a place of security that the health of the babe may not be injured. Our author is equally embarrassed to discover the cause of the preference which the white men give to the negroes, which is owing to the extreme coolness of their skin in a hot climate. In Egypt a rich man will, for the same cause, choose a black concubine during the hottest months, in preference to the Circassian beauties of his harem.

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The women are generally very prolific, and continue to bear children to an advanced age. The infants are not wrapped in bandages as in Europe; and superior freedom gives superior health. But, in general, the inhabitants of Martinique are pale, and have not that bloom observable in the people of France. Our author justly blames the habitual use of strong liqueurs and coffee, which heat the blood; while spices taken in some excess are extremely salutary in hot climates. The negroes were subject to a disorder, called the *pians*, which some have supposed a branch of the venereal disease; but our author remarks the radical difference, as the *pians* like the small-pox never recur.

Most of the native quadrupeds have been destroyed: but rats and mice unhappily abound, while the mole is said to be totally unknown in the West Indies. The animals imported from Europe differ in their periods of gestation, nor is that period regular. Sheep have been known to produce seven births in three years. There is in Martinique a bird called the Whistler of the Mountain, his cry so much resembling a man whistling that strangers are always deceived. The red ant was very destructive till an antidote was found by putting arsenic into their nests, or even on their usual path, when they perish by millions. According to our author the real cinnamon tree is a native of Martinique. He advises the use of lime, as a manure destructive of ants and other insects in the sugar plantations; and makes a singular observation concerning an easy but unaccountable mean of rendering meat tender, which he learned in the West Indies, and afterwards practised in France with the same success. It consists in fastening the meat to a fig-tree, and at the end of a few hours it will be found perfectly tender, but if removed too soon, it will be found thready. The scientific exactness of the author in his other reports is an inducement to repeat this singularity, which may be more easily practised than credited.

The hurricanes are very violent in Martinique; the largest trees are either torn up by the roots, or snapped like reeds; the plantations are utterly destroyed, and even the grass beat down and dried as if it had been burnt; while the fall of the trees, and the torrents of rain, leave holes and crevices on the sides of the hills. In one moment the superb forest appears like an assemblage of masts, and the verdant opulence of summer

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summer is succeeded by the desolation of winter. The land and sea seem mingled together, while the wind sounds like approaching thunder.

The wind generally ranges betwixt the E. and E. N. E. The storm does not seem to arrive from a distance, but is felt instantly, and seems to end where it began. The rain, as in the tropical regions, descends in large drops resembling the sound of hail.

In 1770, Martinique contained 11,588 whites, 2,524 free people of colour, and 71,142 slaves.* It was thought that the slaves were too few for the cultivation, which was chiefly that of sugar canes; with some cacao, indigo, cotton, and coffee. The noted snuff, called *Macouba*, is made of tobacco raised in that parish in the north of Martinique. In February 1771, there was the most violent earthquake which had been felt since 1727. It was observed that the shocks continued during the whole of the moon, and ceased with the new moon on the 16th March.

The maps of Martinique and Guadaloupe were found to be very defective; and are corrected in the maps which accompany the work above cited.

In the statistical account of France, published by Herbin, we are informed that the population of Martinique, in 1788, consisted of 10,603 whites, 4851 free mulattoes, and 73,416 slaves. The exports at that time amounted to 25,640,000 francs; while the imports from France amounted to 15,133,000 francs of French products, and 9,198,000 francs of foreign trade.

Guadaloupe.

Though the seat of the government be at Martinique, Guadaloupe is the largest and most important of the French Caribbee islands. In the *Histoire Generale des Voyages*, Prevost has given a minute account of this island, which cannot, however, be much praised for its accuracy.† It is divided into two portions in a very singular manner by a small arm of

* Voyage par ordre du Roi, Paris, 1778, 4to. Vol. I. p. 174.

† For example he says, that Du Tertre places Guadaloupe in 46° N. lat., while modern travellers placed it in 16° 20'; but he wisely adds, "in a large isle these measures may vary according to the place!" The abbé Prevost was a writer of romances, and probably did not know that 30 degrees make 1800 g. miles, a difference too considerable for the distance of places in an island. The latitude of Du Tertre is an error of the press, 46 for 16. In the next sentence Prevost says, that Guadaloupe is divided into two parts by a small arm of the sea running E. and W. while that arm runs due N. and S.

the sea running N. and S., the portion on the N. E. being called *La Grande Terre*, and the other on the S. W. the *Basse Terre*, but more generally Guadeloupe. On the western shore, Labat describes a singular phenomenon, the sea being so hot, at a small distance from the shore, as to boil eggs; and on moving the sand a strong odour of sulphur is perceived. There is also a boiling fountain, and a hot marsh, the last of which is very deceitful and dangerous to strangers.

The same traveller visited the noted *Soufriere* or Solfaterra of Guadeloupe. The view is here very extensive, including Dominica, the isles called Saintes, Grande Terre, and Marie Galante, with Martinique, Montserrat, Nevis, and other isles. After proceeding about three hours and a half he arrived amidst burnt stones, and places covered to the depth of six inches with white ashes, yielding a strong smell of sulphur. The summit is a large platform, covered with heaps of burnt stones of different sizes, and the earth smokes all around, especially where there are holes and crevices. On mounting a peak about ten or twelve fathoms in height, and which is free from ashes and smoke, the mouth of the furnace is perceived on the east, being, in the time of Labat, an oval aperture, of which the greatest diameter might be eighteen or twenty fathoms. The brink was covered with large stones, mingled with ashes, and with heaps of pure sulphur. From time to time there exhaled torrents of black, thick, and sulphureous smoke, mingled with sparks of fire, which are not a little noxious when the wind bears them towards the traveller. Labat also observed another aperture of a smaller size, and resembling a ruined vault, whence there likewise issued thick smoke and sparks of fire. All the environs of these apertures are full of smoking cracks and crevices, leaving little doubt that the mountain is hollow, and full of inflamed sulphur, which consuming by degrees weakens the vault and causes new crevices. On the descent, the earth sounded under the feet like the deck of a ship, and on moving a large stone the smoke instantly issued. The air on the summit is very cold, but the negroes frequently ascend to gather sulphur which they purify and sell.

Two hundred paces beneath the large aperture, Labat observed three pools of warm water, the largest about six feet wide, being full of a

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brown water, smelling like that in which the smiths extinguish iron; the second, which is white, tastes like alum; and the third, which is blue, has the taste of vitriol. There are several springs which unite and form torrents; one of which called the White River, being contaminated with acids and sulphur, falls into the river St. Louis. On leaving these frightful deserts, the beauty of the adjacent country forms a striking contrast.

Labat afterwards describes the portion called Grande Terre. The limb of the sea which divides it from Guadaloupe proper is about fifty fathom wide at its northern mouth, but in some parts is not above fifteen fathoms. The depth is also unequal; in some parts it will admit a ship of five hundred tons, while in others a bark of fifty could not pass at low water. The breadth is often confined by mangoe trees, but the navigation is pleasant, the water being generally calm and clear like a mirror; and the length is about two leagues.

Guadaloupe was first settled, in 1635, by five hundred and fifty French, conducted by two chiefs, Loline and Dupleffis; but the progress was so slow, that, in 1700, there were only three thousand eight hundred and twenty-five white inhabitants, three hundred and twenty-five free people of colour, and six thousand seven hundred and twenty-five slaves, of whom a considerable portion consisted of Caribs. There were only sixty small manufactories of sugar, and sixty-six of indigo, with some cotton and a little cacao. The horses, mules, asses, were sixteen hundred and twenty; and the bees three thousand six hundred and ninety-nine.

In 1755, the colony was peopled by nine thousand six hundred and forty-three whites, and forty-one thousand one hundred and forty slaves. There were three hundred and thirty-four sugar houses; and the cotton, coffee, cacao, had increased in a like proportion, while tobacco and indigo were added to the produce. The banana trees for the food of the slaves were computed at two millions twenty-eight thousand five hundred and twenty; with thirty-two millions five hundred and seventy-seven thousand nine hundred and fifty ditches of manioc. The horses amounted to four thousand nine hundred and forty-six, mules two thousand nine hundred and twenty-four, asses one hundred and twenty-five; with thirteen thousand nine hundred and sixteen bees, eleven thousand

land one hundred and sixty-two sheep and goats, and two thousand four hundred and forty-four swine. Such was the state of Guadaloupe when, in the month of April 1759, it was conquered by the English, who, as usual, rather contributed to its prosperity. In 1763 it was restored to France.

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The valuation, in 1767, exceeded that of 1755. France at that time received from Guadaloupe a hundred and forty thousand four hundred and eighteen quintals of fine sugar; twenty-three thousand six hundred and three of raw sugar; thirty-four thousand two hundred and five of coffee; eleven thousand nine hundred and fifty-five of cotton; four hundred and fifty-six quintals of cacao; eighteen hundred and eighty-four quintals of ginger; two thousand five hundred and twenty-nine of Campechy wood; with twenty-four boxes of confections, a hundred and sixty-five boxes of liqueurs, thirty-four casks of ratafia, and twelve hundred and two skins. These articles were sold in the colony for seven millions one hundred and three thousand eight hundred and thirty-eight livres; while the merchandise received from France only cost four millions five hundred and twenty-three thousand eight hundred and eighty-four livres. It was suspected that much of the produce was smuggled, as it was well known to exceed that of Martinique.

In the voyage performed by Messieurs Verdun de la Crenne, de Borda, and Pingré, some illustrations of various positions in Guadaloupe may be found. They observed that the mountains of this isle do not yield in height to those of Martinique, and the Soufriere continued to eject smoke, and sometimes flames.*

In the tenth year of the French Republic, it was decreed, that the islands of Martinique, Saint Lucie, and Tobago, should be ruled by three magistrates, a captain-general, a colonial prefect, and a grand

* Paris, 1778, 4to, vol. i. p. 184, &c.

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judge.* It is to be regretted, that in the work quoted the productions and commerce of the French colonies are generally considered in one mass, while those of each colony ought to have been estimated apart. In 1788, the population of Guadaloupe consisted of 13,466 whites, 3,044 free mulattoes, 85,461 slaves. The exports in 1788, were valued at 15,053,000 francs, while the imports from France amounted to 5,362,000 francs.

The other French possessions in the West Indies are of small account, and uncertain tenure; and the whole during war seldom fail to fall into the hands of the English.

* Herbin, *Statistique Generale de la France et des Colonies*. Paris, 1803, 8vo. tom. vii. p. 5.

THE BAHAMA OR LUCAYOS ISLANDS.

THESE isles, though very numerous, and some of them of considerable size, are little known. They are said to have been totally deserted when, in 1672, a few Englishmen took possession of the island, which they called Providence.* But becoming a nest of pirates, a force was sent from England to subdue them; and a small regular colony established about 1720. The English in the Bahama Islands are computed at three or four thousand; half being settled in Providence, where there is a fort called Nassau, and a small harbour. The few exports are cotton, dying woods, live turtle, and salt. The soil seems to be naturally barren; and the narrow length of these islands, much exposed to the heat and the winds, accounts for their comparative insignificance in this grand commercial archipelago. BAHAMAS.

A late traveller in the West Indies has given a good description of the Bahama Islands, whence some interesting particulars shall be subjoined.

“ That immense accumulation of sand, called the Great Bahama Bank, offers a matter of curious speculation to the geological observer. Bahama Bank. Like the shores of the Bahama Islands in general, I believe it consists in a great measure of the relics of sea-shells in the form of sand, more or less worn and rounded by the action of water. The bank, which occupies an expanse of some hundred leagues in circumference, is bounded southerly and westerly by Cuba, and on the north-east by a broken range of innumerable little islands, called the Keys, which immediately separate it from the unfathomable sea of Exuma Sound. The water on the Bank in this quarter was supposed to be from fourteen to eighteen feet deep. It did not appear from any thing I could learn, that the soundings have either increased or diminished for many years past. At a certain depth, probably, the sand is underlaid by calcareous rocks,

* Raynal, v. 64.

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from the heads or fragments of it, which in many places, on approaching the islands, appear at the bottom; and which, as you coast the Keys, require the expertness of a vigilant pilot to prevent the vessel in a tossing sea, from striking herself against their protruded heads in the shoals, which often occur. But the light colour of the sand, and the transparency of the water, render the passage neither difficult nor dangerous, with a proper degree of attention."*

"Approaching towards the continent of North America, we now, for the first time, experienced a north-west wind, which induced us to continue at anchor, till the north-east trade recurring, we got under weigh, and soon ran out of sight of the islands, proceeding over the Bank towards New Providence. The reflection from the white sand of the Great Bank, rendered the sky almost of a livid colour. It was a novel situation, to behold an expanse of sea unbounded by any land; and the bottom, at the same time, distinctly visible at the depth of a few feet. Although the day was cloudless, and the atmosphere uncommonly pure, the azure of the horizontal sky seemed flushed with an infusion of pink colour, producing an effect as beautiful as it was singular. We now drew near to New Providence."†

Providence.

"The harbour of New Providence, to which the early settlement and present consequence of this island may be attributed, is formed, like that of Exuma, by a long key, or slip of land, running in front of the town of Nassau, nearly parallel with its length, from east-south-east to west-north-west. In entering through the eastern channel, I passed by a small key, which formed a boundary on that side, whilst two or three corresponding islands appeared in the opposite quarter, between the extremity of Hog Island, (or the principal key) and the shore of Providence, rendering the inclosed position, if not completely land-locked, yet inaccessible, in every direction, to the unbroken violence of the sea. The body of the town is on the southern side of the harbour, and extends on a pretty steep acclivity to the summit of a ridge, which runs,

* M'Keanen's West Indies, p. 202, 1804. 8vo.

† Ibid. p. 208.

as I observed of the other islands, for the most part in the direction of *BAHAMAS*, the general line of coast.

"The view of the town, comprehending on the west a large fortress (on the same eminence), and the barracks for the troops, overlooking the sea, is extremely striking from the mouth of the harbour. The general aspect of the place has something in it fresh and lively. The streets are regularly disposed, and in some parts remarkable for their unparalleled smoothness, being nothing more than the solid surface of a stone quarry, which has afforded of *late* abundant materials for building on the spot: I say of late, for singular as it may appear, when spoken of a town as well built as any I saw in the West Indies, and which promises to become distinguished for its beauty, the durable buildings in Nassau, were originally composed of stone, imported from the Bermudas, at the distance of more than two hundred leagues. But the rock of the native quarries has been discovered to answer effectually every purpose of masonry, by a wash of lime, which gives both consistency and beauty to the exterior. A considerable square, or quadrangle, susceptible of much future embellishment, now occupies a large space in the western division of the town. The north side of this open space, near the water, is bounded by palisadoes, inclosing the works of a neglected fortress, from whence the town is named; constructed about the year 1740, by an engineer of the name of Bruce. The present residence of the governor of the Bahamas is at some distance from this square; and towards the upper end of one of the streets, has a pleasing command of view, which includes the lower part of the town, Hog Island, the harbour intervening, and the more distant sea.

"The ample materials furnished by nature, and the taste of the inhabitants, as well as circumstances of the late war, have disposed them to the extension of their public buildings. The court-house now erecting, a new jail, and work-house in its vicinity, and the eastern parish-church, for which more than five thousand pounds was voted during one session by the Legislature, are instances of simultaneous and liberal expence, by a small community in the improvement of its metropolis, which, if persisted in, must soon render it highly attractive and ornamental. Indeed one would suppose

BAHAMAS.

suppose Nassau at present a very agreeable winter residence for the valetudinarians of the southern part of the West Indies, particularly of the Windward Islands, from which the voyage is short and easy. It affords a medium temperature of climate, between the heat of those islands and the keen air of North America; and the greater part of the year is extremely healthy.

"The governor's dwelling is provided for him at the expence of the colonial government, which pays a rent of three hundred and twenty pounds *per annum* for his present house. But it is proposed to erect a new one, on a more elegant and improved plan, for which the sum of ten thousand pounds has been already voted by the Assembly. The opulence of this small island is derived from other sources than the soil; for, I believe, it can scarcely boast of a single cotton plantation, and remains in a great measure clothed in its native wood. Many of the principal planters, however, on the other islands, who are concerned in the administration of the government, or in trade, have fixed their residence at Nassau. It is also the principal military and naval station in the Bahamas. But on subjects at all connected with its defence, or the means it may possess of annoying the enemy at a period of hostilities, I shall forbear to speak.

"The Town of Nassau is divided into two parishes, each of which is provided with a church and rector, liberally supported by public contribution, or the eleemosynary bounty of the English society for propagating the gospel.

"The principal trade carried on at present is with England, the southern islands in the West Indies, and the United States of America, from whence the island derives continual supplies of live stock and provisions. Like most other parts of the prosperous empire of which it constitutes a part, Nassau has had reason of late years to boast of an increasing commerce; in proof of which, it is said, that while the exports in 1773 and 1774, amounted only to 5216*l.* 8*s.* 10*d.* and the imports during the same period, to 3592*l.*; in 1786 and 1787, the former were augmented to 58,707*l.* 10*s.* 1*d.* sterling (exclusive of a great deal of bullion, of which no account was kept), and the latter to 136,359*l.* 14*s.*

11d. During the succeeding years of war, without any diminution of ^{BAHAMAS,} their increasing prosperity, the attention of the inhabitants of Nassau has been diverted from a regular trade. It appeared to be visited often, whilst I remained there, by African slave-ships, some of which disposed of their cargoes on the island, but the major part proceeded to the Havannah."*

This account of the chief settlement shall be followed by a description of a natural curiosity in Crooked Island.

"Previous to my departure, I took occasion to visit a great natural ^{Crooked Island.} curiosity, an extensive excavation of the rocks, which, from the singular resemblance of its interior to some old dilapidated structure, very much reminded me of one of Mrs. Radcliff's ruinous and mysterious castles. At the base of a cliff facing the shore, the rock, which is of a loose and friable texture, appears to have been exposed to the violent action of the breakers, and the cavities have been shaped in grotesque figures, and embossed or wrought into holes, every where smoothed by the lambent water. The principal cave is at some few paces from this beautiful grotto, with which it has apparently no communication, and you are obliged to enter it, by descending from an aperture in the rock above. Within this cave, the devastation of the water, evident in various places throughout the island, has left more remarkable traces. In some spots the top appears as if completely demolished; in others, it is worn and fretted into regular cavities and shapes, giving it an air of Gothic ceiling, and the stalactites and incrustations on the side walls (if they may be so called) have a damp and mouldy appearance, tinged with occasional lines of green and light blue. In various parts the wild fig-trees, which are particularly fond of moisture, have penetrated into the recesses, and shot their bearded roots like clusters of columns on the sides, or through the holes in the roof, which admit the light; and in some places the sun's rays. It extends in a variety of capricious and romantic figures to a distance which has never been yet traced; and the imagination, prone to the marvellous, has led some persons to believe,

* The Bahamas are greatly infested with two baneful insects, the red bug and chenille, which destroy the cotton plantations. M'Kinnen's West Indies, p. 21.

that

BAHAMAS.

that it runs nearly across the island. The bottom was covered with a concretion, many feet deep, of some elastic substance resembling mould, but which is not possessed of any vegetative power. A philosophic gentleman conceived, that it was an accumulation for many ages of the dung of the bats, which swarm in the dark recesses of this singular cave. Perhaps it might be going too far back for a cause, to ascribe it to a deposit of marine substances at some very remote period by the sea." *

Nor in the natural history of the Bahama islands must a bird of singular beauty be omitted.

Acklin's isle.

" But the bird more remarkable for its size and brilliancy of colour than any perhaps in the western world, and which is seen now principally on the most retired shores and swamps of these islands, is the *Flamingo*. For several successive mornings, I observed an extended flock of *Flamingos* from an eminence, feeding with their heads under water, in the shoal part of a distant bay; but so great was their watchfulness and timidity, that it was impossible to approach them. Their colour, at a remote view, appears of a lively pink. The young birds, when taken, are found to be nearly white; and the feathers on the pinions, and on the necks of the old ones, are of a deep scarlet. The quill feathers of some of the birds I found tipped with black. As I saw them at a considerable distance, their glowing plumage, contrasted with the green surface of the water, was extremely beautiful. The naturalists describe this bird, called *Phœnicopteros* (a species of crane), as remarkable for its gentleness and mansuetude. Columbus, and his followers, observed a great number, of what they called *tall red birds*, perfectly tame, in all the Indian villages on the south side of Cuba, similar to those which the early voyagers found domesticated amongst the negroes on the coast of Africa. They were often seen (according to some of the old inhabitants), in the Windward Islands: but as those parts have become more frequented, their native shyness has driven them to the tranquil and solitary shores of the Bahamas; though in the more cultivated islands even here, they begin to disappear. Towards dusk they generally paid a visit to a morass in the interior of

* M'Kinnon's West Indies, p. 161.

Acklin's

Acklin's Island, in the neighbourhood of which it was supposed they BAHAMAS. roosted. I succeeded, after much trouble, in procuring one or two of them to be taken alive. When young they have been often reared by the inhabitants, for their nature is extraordinarily tractable and mild. The flesh of this bird is extremely rich, much like that of the wild duck, but with a strong fishy taste. The tongue is certainly delicate; but I did not find it worthy of the high encomiums bestowed on it by the ancients, by whom a dish of flamingos' tongues was esteemed one of the greatest delicacies in their luxurious feasts."*

St. Salvador has been long celebrated as the first land reached by Colon in the western hemisphere, and some idea of its present state may not be uninteresting.

"St. Salvador, in 1788, contained forty heads of families, sixteen St. Salvador. planters, and 458 slaves, at which time 2000 acres of land were found to be in cultivation. The soil is esteemed good: but the crops of cotton suddenly failed a few years ago, which would have occasioned the total desertion of the island, if a seasonable relief had not been afforded by the introduction of a new species of the plant from Georgia."†

Botany of the West Indies. ‡

THE West Indian islands, from their tropical situation, and the great Botany. height of their mountains, command a large extent of temperature, and contain a proportional variety of native vegetables. We are far, however, from possessing a complete flora of these countries: activity in scientific research is not very congenial either with the manners or the commercial engagements of the inhabitants; and the pestilential exhalations from the swamps, and the pathless intricacies of the forests, "strangled with waste fertility," that on all sides gird the mountains, may well dispirit the most adventurous naturalist.

Several of those giant sons of the forest that were noticed in the botany of India grow wild in these islands, and equal in stateliness their

* M'Kinnen's West Indies, p. 185.

† Id. p. 201.

‡ Barham, Hortus Americanus.—Sloane, Catalog. Plant. quæ in insulâ Jamaica sponte proveniunt.—Chevalier, sur les plantes de St. Domingue.—Edwards's Hist. of the West Indies.

BOTANY.

oriental brethren. Such are the Indian fig or banyan tree, at first a feeble stem, twining for support round some neighbouring plant, but in the course of years becoming a grove by itself; the bombax ceiba, or wild cotton tree, from a single hollowed trunk of which has been formed a canoe able to contain a hundred men; the logwood; and the locust tree, most grateful in these torrid regions by its night of shade. Scarcely inferior to these are the wide-spreading mahogany, the brasiletto, the cabbage palm, the tallest of all vegetables, rising sometimes in a stait majestic column to the height of nearly two hundred feet, and the great fan palm, one of whose capacious leaves will shelter eight persons from the rain or sun. The cecropia deserves mention, not only as a large timber tree, but for the excellence of its fruit, and its tough fibrous bark that is used for cordage; the tamarind tree for its airy elegance, and its acid pods, of no mean estimation in this sultry climate. The laurus chloroxylum, or cog wood, is of high value in mill work; and the iron wood, the Barbadoes cedar, and a species of cordia, known in the English islands by the name of Spanish elm, are in great request for durable substantial timber.

The fruits of the West Indies are deservedly celebrated for their variety and flavour; the plantations in the mountainous districts yield the apple, the peach, the fig, the grape, the pomegranate, the orange, and all the other European fruits, while the more sultry parts abound in native products that may well vie with, if they do not surpass, these adopted strangers: the pine-apple, the sapota or sapadilla, the avocado pear, the cashew nut, the cocoa nut, the psidium or guava, the custard apple, the papaw, the shaddock, and the granadilla, form the principal.

The commercial products of these islands are for the most part procured from cultivated and naturalized vegetables, which therefore can scarcely be admitted in an account of their indigenous plants. The vanilla however, is found truly wild in the woods of Jamaica and St. Domingo; the aloe, though cultivated only at Barbadoes, grows spontaneously on the dry rocky soils of Cuba, the Bahamas, and many other of the islands: the bixa orellana, from which is procured the annotta, is common in the West Indies, and all the hot parts of America; and the fragrant pimento or all-spice is not only a genuine native, but even

refuses to be propagated by human care. Of all the beautiful species of BOTANY. myrtle, the *myrtus pimenta* is perhaps the most beautiful, and from the eloquent pen of Bryan Edwards it has received its merited praise; it rises in natural groves on the side of the mountains that look toward the sea, to the height of twenty or thirty feet, and as no other shrub will grow beneath its shade, it always affords a cool open walk, perfumed with the exquisite fragrance of its snowy blossoms, floating in loose clusters on its deep green foliage.

But few of the other indigenous vegetables of the West Indies are likely to interest the general reader; of these the arborecent ferns are perhaps the most striking: while the British ferns never exceed the height of three or four feet, and die to the ground at the approach of winter; those species that enjoy the perpetual summer of these islands are perennial plants, and the *polypodium arboreum* in particular throws up a trunk above twenty feet high, terminated by broad pinnated leaves, which gives it exactly the habit and general appearance of a palm tree.

Three plants remain to be mentioned, namely, the *guaiacum* or *lignum vitæ**, of which both the resin and the wood are useful, the former in medicine, the latter as a material for pullies and turnery ware; *winterana canella*, whose bark is introduced into the pharmacopœa; and *cinchona Caribbæa*, a congenerous species of the Peruvian bark.

* The *arbor vitæ* of gardeners is the *ibuya*, an useless tree. The *pala santo* is sometimes confounded with the *guaiacum*.

SOUTH AMERICA.

Extent.—Original Inhabitants.—Climate and Seasons.—Lakes.—Rivers.—Mountains.

Extent.

THIS division of the new continent extends, as already explained, from the mountainous boundary between the provinces of Vera-gua and Panama, the latter province belonging to South America. But the land afterwards ascending considerably further to the north, the length must be computed from about 12° of N. lat. to 54° S. lat. and yet further, if the Terra del Fuego be comprised. The length is at least sixty-six degrees, or 3960 g. miles; while the breadth, as already mentioned, is about 2880 g. miles.

Original Population.

The original population of this large portion of the earth remains obscure, but may most probably have been from Africa, where copper coloured nations with long hair have been recently observed. The discovery of Brazil, by a Portuguese fleet destined to pass the Cape of Good Hope, shews that America might have been disclosed by mere accident, and that the winds might waft vessels across the Atlantic. The constant trade winds, blowing from east to west, could scarcely fail to impel some rash African mariners to the American shores. This conjecture may perhaps admit more probability, when further discoveries and investigations shall have been made in the African dialects.

That the indigenes of America proceeded from Africa, there are many reasons to believe. 1. Copper-coloured tribes, with lank hair, have been discovered in Africa, but in no other quarter of the world; and it is well known that this colour is esteemed peculiar to the American indigenes, while the southern Asiatics are tawny or olive. 2. The trade

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From L.A. CRUX, corrected by the astron. obs. of Malagasia, Ex. No.

Published March 2^d 1802, by Cadell and Davies, Strand, and Longman and Ross, Paternoster Row.

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winds bear directly from Africa to America, and a canoe or canoes of savages might as easily have been carried thither by accident, as the boat of Teneriffe which was carried to Trinidad. Gumilla ii. 50. 3. The numerous human sacrifices, and other cruelties of the American indigenes, strictly infer an African origin, no such practices being found among the Asiatic tribes. 4. The oblique eye of the eastern Asiatics, who, according to theory, ought to have peopled America, is no where to be traced on that continent. 5. The beard of the indigenes of America is thin and woolly, like that of the Africans, while that of the oriental Asiatics is thin, but strait and strong. 6. The Natchez of Florida say that their ancestors came from the rising sun or east, that the voyage was long, and the persons in danger of perishing when they discovered America. Du Pratz, ii. 113. 7. The natives of the Canaries are said to have been extremely tall, and may perhaps have been the ancestors of the Tehuels, called by Europeans, Patagons, who always bury their dead on the eastern shores, as looking towards the country of their ancestors. See the French Astronomical Voyage, 1778, 4to. tome i.; and Falkner's Patagonia.

ORIGINAL
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TION.

Other minute arguments might be used, such as that the initial sound *Mb* as *Mbao*, so common in Paraguay, &c. seems only known to the African and American enunciation; and it also appears in the Coptic, which is asserted by the best judges to be a peculiar and indigenal idiom, and not a dialect of the Assyrian as I formerly imagined. An elaborate and formal comparison of the languages is still wanted; and there is a radical deficiency with regard to those of the copper coloured tribes in Africa.

From this theory may probably be excepted the Peruvians and the Araucans, who, from the mildness of their manners, and other circumstances, have impressed me as of Asiatic origin.

The progressive geography is here synonymous with the various discoveries which have been indicated in the general view of America. Many parts of the interior are still obscure; wide regions on the great river Marañon being covered with impenetrable forests, and others flooded by the inundations, so that much precision can rarely be attained. In the south there are vast saline plains, and small sandy deserts,

Progressive
Geography.

PROGRES-
SIVE GEO-
GRAPHY.

ferts, equally adverse to geographical certainty. The Spanish maps are likewise of noted inaccuracy. But great light has been diffused over South America by the recent large map of Don Juan de la Cruz, Cano, y Olmedilla, geographer to the king 1775, republished by Mr. Faden 1799. So recent is any exact delineation of this grand division of the new world ! *

The religion of South America is in general the Roman Catholic, with the exception of the small Dutch territory, and a few savage tribes.

Climate and
Seasons.

The southern extremity, extending far beyond that of Africa, is exposed to all the horrors of the antarctic frosts ; and Terra del Fuego, in the S. latitude of 55° seems exposed to the almost perpetual winter of Greenland in N. lat. 70° . Tehuella, or Patagonia, consisting mostly of open deserts and savannas, with a few willow trees on the rivers, seems to enjoy a temperate but rather cool climate. On proceeding towards the north the great chain of the Andes constitutes real zones and climates, which strangely contradict the theories of ancient geographers ; the chief inconveniences of the torrid zone being extreme cold on the mountains, and extreme moisture in the plains'. Near Callao the months of October and November form the spring. In many regions what is called summer is the dry season, often extremely cold ; and the rainy season is called winter. The former begins in May, which is nearly the beginning of winter in the lower parts, and continues till November, when the slight fogs, called winter in the vales, begin to disperse. On the mountains winter begins in December, which in the plains is the first month of summer ; and a journey of four hours conducts the traveller from one season to another. At Quito, situated between two chains of the Andes, on a plain of remarkable elevation, the months from September to May or June constitute the winter ; and the other months the summer ; the former being exposed to almost constant

* Even the large map by Kitchen, 1774, of the southern half, inserted in Falkner's Patagonia, though pretended to be built upon authentic materials, will be found to be almost wholly imaginary, when compared with that of La Cruz ; and even the last is far from being free from defects. Mr. Faden's copy is very inaccurate, as the engravers could not be supposed to understand Spanish.

¹ Ulloa Memoires Philosophiques, Paris, 1787, two vol. 8vo. i. 89.

rains,

rains, which are also frequent, but at longer intervals, during the summer season¹. At Carthagena the winter or rainy season, extends on the contrary, from May to November; and the summer, or dry season, from December to April. At Panama the summer begins rather later, and ends sooner; at Lima, in a southern latitude nearly corresponding with the northern of Carthagena, the heat is far more moderate; and spring begins with December, winter with July: the summer is in February, the autumn in May.

In general the confined regions on the west of the Andes are dry, the clouds being arrested by their summits; while the wide countries on the east of that chain are exposed to torrents of rain, from the eastern or trade winds blowing over the Atlantic. In Brazil the rainy season begins in March or April, and ends in August, when the spring begins, or rather the summer; the distinction being only between wet and dry seasons². Other illustrations of the climate and seasons will occur in the descriptions of the several countries.

South America can scarcely boast of any inland sea; but the great river of Amazons, and that of La Plata, may be said to supply this deficiency; and if numerously peopled by industrious inhabitants, there would be no room to complain of the want of inland navigation throughout the greater part of this ample portion of the earth. The gulfs on the S. W. extremity containing the isles of Chiloe, St. Martin, &c. are of small consequence, and in a remote and disadvantageous position. No part of the globe displays so great a number of lakes as North America; and the southern part of the new continent is perhaps equally remarkable by their rarity. Many supposed lakes, as that of Zarayos or Sharayos, in the course of the river Paraguay, only exist during the annual inundations, which are on a far grander scale than those of the Ganges, and may be said to deluge whole provinces. In the most northern part the Lagoon of Maracaibo is remarkable, being

Lakes,

¹ Ulloa's Voyage, i, 278, but see the observations at the end of vol. ii. of the French translation, 200 vol. 4to. which is far superior to the English. At Riobamba the winter lasts from December to June, being far colder than at Quito. From the gulf of Guayaquil to the desert of Atacama, a space of 400 leagues in length by 20 or 30 in breadth, it never rains; and thunder and storms are unknown. Bouguer, xxiii.

² Pilo, lib. i.

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LAKES.

a circular basin about 100 B. miles in diameter, receiving numerous rivers and rivulets, and communicating with the sea by a considerable creek. The celebrated lake Parima, called also Paranapitinka or the White Sea, is represented by La Cruz as more than 100 B. miles in length by 50 in breadth. This size, and even its existence, have been doubted, as it was the noted seat of the city El Dorado, the streets of which were paved with gold; a fable which seems to have arisen from a rock of talc reflecting, like a mirror, the golden rays of the sun. According to La Cruz this lake receives the Orinoco on the N. W. which afterwards emerges, and pursues a westerly course, till it finally bend north and east. The Parima also gives source to the great river of the same name, likewise called the Rio Blanco, which joins the river Negro, and great river Marañon. In this part of South America there is, as it were, a contest betwixt land and water; and so level and mutable is the soil, that the rivers seem dubious what course to pursue, as they flow in every direction, and branches of the Orinoco communicate with the tributary rivers of the immense Marañon. The natural history of the celebrated lake of Parima would be not a little interesting, but a deep obscurity pervades those regions.

TITICACA.

In Amazonia and Brazil there do not appear to be any lakes of consequence; but the Portuguese are inferior even to the Spaniards in geography and natural history, and many discoveries remain to be made in their ample possessions. The lake of Zarayos or Xarayes is a mere inundation of the river Paraguay, and is justly exploded*. But that of Titicaca, nearly in the same parallel, and in the kingdom of Peru, though now ascribed to the viceroyalty of La Plata, is regarded as the most important in South America. Ulloa says that it is of an oval figure, the circumference about 240 miles; and the depth 70 or 80 fathoms. It receives ten or twelve rivers and several rivulets; but the water, though not saline, is nauseous, being probably tainted with sulphur or bitumen. It contains several kinds of fish, and is frequented by geese and wild fowl. In an isle of this lake Mango Capac, the founder of the Peruvian monarchy, reported that the sun, his father, had placed him, with his sister, and consort, Oello; and here a temple was dedicated to the

* Debrizhoffer, i. 200.

sun,

fun, the most splendid in the kingdom, and profusely decorated with LAKES. plates of gold and silver. On the Spanish invasion these treasures are said to have been thrown into the lake.³

A few small lakes are found near the course of the river Parana; and there are two large lagoons on the eastern coast, lat. $31^{\circ} 33'$. Towards the S. of Chili there are some lakes of considerable size, communicating with the river of Sauzes, or Willows, one of them being called the lake of the Tehuels: and a few small lakes further to the S. are saline, a wide extent of territory being impregnated with nitre.

The river of Amazons, so called from a female tribe inured to arms, Rivers. discovered on its banks by the first navigators, but more properly by a native term the Maranon,* is celebrated as the most distinguished r. Maranon. river, not only in South America, but in the whole world: and this reputation is no doubt just when its magnitude is considered, as well as its length. For in the latter attribute it seems to be rivalled by the Kian Ku of China, and perhaps by the Ob of Siberia, as already explained in discussing the course of the Missouri; when it was observed that, on the comparative scale of merely tracing the course by an accurate map, and allowing for the great changes of direction, the length might be estimated at about 2300 miles; and that of the Rio de la Plata about 1900: but the estuary of the Ob is frozen, and that of the Kian Ku cannot exceed a mile or two in breadth, while the two grand American rivers are of surprising magnitude. The Chinese annals say that their great rivers have been confined by art, while in ancient times they inundated whole provinces, like the Maranon.

The voyage of Condamine contains the most accurate description which has yet appeared of this grand river.⁴ The source is not yet absolutely ascertained. The celebrated mathematician just quoted, says, that the Ucaia is the chief stream, as its sources are more remote than those of the supposed Maranon; and it is a considerable river in

³ Ulloa, ii. 163, or Tome i. 534, of the French translation.

* As the term is native it is idle to retain the Spanish *n* with a bar, corresponding to the French *gn* in *gagner, gagnant*, &c. In any other speech *gn* would be a false enunciation, especially as unknown in the native languages.

⁴ Relation abrégée d'un Voyage fait dans l'intérieur de l'Amerique Meridionale, Paris, 1745, 8vo. or Maestricht 1778, 8vo.

RIVERS.

the same parallel, when the other is only a torrent.* On the other hand the Marañon makes a wide circuit, and is of extraordinary depth. According to Ulloa, the Marañon issues from the Lake of Lauricocha, near the city of Guanuco, S. lat. 11° , whence it directs its course south for about sixty miles, then bends east through the country of Jauja, where, after falling from the east side of the Andes, it passes N. to the city of Jaen.† Thence it proceeds in its long progress towards the east; and joins the Atlantic after a course, including all the windings, of 1100 leagues, or 3300 miles. Ulloa, also doubts, whether the Ucaial must not be regarded as the principal stream. In the map of La Cruz, what he calls the *ancient* Marañon, or Paro, corresponds with the description of Ulloa; but receives the Apurimac, a river of far longer course, rising near the town of Arequipa, on the west of the great lake of Titicaca, S. lat. $16^{\circ} 30'$. If this representation be just, there is no doubt that the Apurimac is the original and proper river of Amazons: and both of these sources belong to the UCAIAL. The river called the New Marañon, (properly the Tunguragua, or Lauricocha,) is of far shorter course, and was only styled the Marañon from a mistake in its fountain. In the map of La Cruz, though the course of the Ucaial be more direct, it amounts to about seventeen degrees at its junction with the supposed Marañon, which may be called the river of Lauricocha*; while the latter does not exceed fourteen degrees and a half.

Ucaial.

The course of the Ucaial being through a more remote country, and more unexplored forests than that of the Lauricocha, its chief features, and natural history, are less known; and the savages on its banks unfortunately massacred their missionary in 1695, so that Condamine and Ulloa are alike ignorant concerning this noble river, which probably presents objects more grand and interesting than those on the Lauricocha. The Apurimac, struggling through the Andes, must also afford many striking scenes, still lost to scientific observation.

Lauricocha.

On the contrary, the Tunguragua, Lauricocha, or new Marañon has been repeatedly described, and was navigated by Condamine from near

* P. 69.

* Ulloa, i. 365. or i. 307, French translation.

• Ulloa expressly uses this name, i. 366, in contradistinction to the Ucaial. La Cruz has most erroneously marked the Mantaro as being the old Marañon.

the town of Jaen, where it begins to be navigable; thence passing N. E. ^{RIVERA.} it arrives at the exterior ridge of the Andes, which it cleaves at a pass called the Pongo, a word in the Peruvian language implying a gate. This sublime scene displays the Lauricocha confined between two parallel walls of almost perpendicular rock. From a breadth of 250 fathoms the river is here contracted to 25; but the rapidity is not extreme, and a raft passes the two leagues in about an hour.

After the junction of these two great rivers, the Marañon, besides smaller streams, receives from the north the Napo, the Iza-Parana, Yupura, the Great Negro which has received the Parima; and from the south the Yavari, Yutay, Tefi, Coari, Puruz, and the great Madera, consisting of the Mamori, and the Ytenas, the chief sources of which are from the eastern side of the Andes, watering a vast extent of this wide continent. The Madera may indeed be regarded as another grand source of the river of Amazons; which is also joined from the south by the Topaísa and Shingu, while its estuary is connected with the great Brazilian river called Tocantinas. Like the Missouri and St. Lawrence the Marañon is discoloured with mud. The breadth at the Portuguese boundary is said to be a league, but it is generally about two miles; and no bottom is found at 103 fathoms. The effect of the tides is perceptible to the distance of 600 miles, but Condamine thinks that the swell is occasioned by the progress of the tide of the preceding day. The banks are generally crowned with vast forests of lofty trees, among which are many of a rare and medicinal nature. Serpents of prodigious size are found in the marshes, and alligators are also common. It seems certain, from the disquisition of Condamine, that some female warriors still exist towards the north of this great river. After it has received the Shingu, the breadth from shore to shore cannot be discovered by the eye. Near its mouth the Bore rises from twelve to fifteen feet in height; and the noise of this irruption is heard at the distance of two leagues.*

* This effect called *porroca* is chiefly observable towards the cape del Norte on the mouth of the Aroury. Condamine, p. 193. The letter of M. Godin to this author contains an interesting narrative of Madame Godin's navigation down the Marañon in 1769. She was perhaps as bold an Amazon as ever appeared on its banks. It is preserved in the edition of Condamine's Voyage, Msslr. 1778.

RIVERS.

The geographical importance of the largest river in the world, and the obscurities which still attend its origin, will warrant a yet more ample discussion from the most recent authorities.

Recent discoveries.

Concerning those grand rivers the Ucaial and the Marañon, Estalla has presented some curious information derived from the Spanish missionaries. He justly observes that the Ucaial is the most important of all the streams which descend from the grand chain of the Andes.* In 1794 it was explored, by orders of the viceroy, by Father Girval, who navigated it from where it receives the false Marañon to its confluence with the Pachitea, and found it of a serene current, and abounding with fish, while animals of chase swarm on the shores. The savage tribes on this superb river are generally pacific, and seem to speak dialects of the same language. Where it receives the Tunguragua or false Marañon it is divided into several branches, the chief of which is not less than one hundred yards, *varas*, in depth. From its junction with the river Beni to that with the false Marañon it is navigable for large vessels more than four hundred leagues; and in the course of three hundred leagues presents one hundred and thirty two islands.

The false Marañon rises from the lake of Lauricocha, about eight leagues to the North of Pasco, and after passing the Pongo, becomes navigable till it falls into the Ucaial or true Marañon. The river Ucaial waters the vast plain called the *Pampa del Sacramento*, which, according to our missionary's exaggeration, is as large as Europe: and by another observation he adds, that where it receives the Tunguragua it is about fifty five fathoms in depth.† The source of the Ucaial is considered as still unknown by Estalla.

In another part of his work,‡ our author more particularly describes the missions on the Ucaial, in the Pampa del Sacramento, which was discovered in 1726, and by a more rational account, contains a surface of eight thousand square leagues, and might support a population of five millions. In 1790, the father Sobreviela sailed down the river Guanuco or Gualaga, which running parallel with the Ucaial, joins the false Marañon, about three hundred miles to the west. The banks of the Gualaga are clothed with beautiful trees, enlivened with a great variety

* XX. 190. † Ibid. 173 and 379.

‡ XXI. 100, &c.

of birds; and one shrub produces a kind of native wax or tallow. At Rivers. the instigation of this missionary, father Girval undertook his first navigation on the Ucaial in 1790, and which is here detailed by our author, whose plan is very desultory, at considerable length.*

He begins with observing, that the river which has been falsely called the Marañon, is by the natives called Tunguragua, and that the Ucaial was at the time of the conquest of Peru, regarded by all the natives as the genuine Marañon, on account of the superior quantity of its water, the number of rivers which it receives, and the greater distance of its source; but was deprived of this honour by the ridiculous and interested perversions of the jesuits. After having mentioned that it is doubtful whether the river Apurimac, or the Beni, must be regarded as the genuine source of the true Marañon,† father Girval thus proceeds.

"Though following the most respectable recent authorities, I have said that the Marañon derives its origin from the lake of Lauricocha, I ought to explain the reasons of those who assign the supremacy to the Ucaial. In the first place its sources are far more distant than those of the Tunguragua, or pretended Marañon of father Fritz: secondly the Beni, Paucartambo, and the Apurimac, are navigable up to a latitude where the false Marañon is yet unborn: thirdly, because the Ucaial, far from being inferior in the quantity of water, is on the contrary broader, and forces the false Marañon out of its course: fourthly, because all the ancient historians of the kingdom have acknowledged the Apurimac as the genuine Marañon: fifthly, because, till the year 1687, the very name of Ucaial was unknown, that river being called the Apoparu, which is as much as to say the Great Paro, which is the name also given by the natives to the Marañon or river of Amazons, after it is joined by the pretended Ucaial. In the year above mentioned a law-suit arose between the Franciscans of Lima and the Jesuits of Quito, for the village and missions of San Miguel de los Conibos. The Royal Audience demanded maps, in order to determine with greater certainty; upon which father Fritz drew the map, which was afterwards engraved at

* XXI. 133, &c.

† This question seems decided by the map of La Cruz, in which the Apurimac by bending to the west pursues a longer course. But La Cruz has misrepresented the course of the Beni.

Quito

RIVERS.

Quito in 1707, and in which the Tunguragua is styled the Marañon, and the Paro is ridiculously called *Ucayali*, a word, which merely signifying a *confluence*, was specially applied by the tribe of the Maynas to that of the Paro and Tunguragua; whence the error of father Fritz; while father Acuna asserted, with equal boldness, that the Napo was the Marañon! The great credit of the jesuits led people blindly to follow the nomenclature of father Fritz."

The boldness of the jesuits in thus attempting to change grand and radical geographical appellations, for the sake of a paltry law-suit concerning a paltry village, will lead the thinking reader to reflect how little credit can be assigned to their relations of distant and obscure countries.

Our author, probably following father Girval, proceeds to mention that the Apurimac rises in the upland desert of Condoroma, in the province of Tinta, also called Canes and Canches, in 16° of S. lat.* thence turning to the E. to the Cordillera of Vilcanota,† it afterwards bends to the W. and N. W. leaving to the east the province of Cuzco. Then declining to the N. E. it forms a semicircle, receiving so many streams on both sides that it cannot be forded even here. Afterwards running N. two leagues below the bridge of the Apurimac it bursts through the chain of the Andes, amidst precipices of incredible height, and which supply numerous streams.‡ At $13^{\circ} 10'$ it is joined on the W. by the river Cocharcas, which descends from the mountains of Guancavelica. After collecting the streams from the mountains of Guanta, it receives on the E. at $12^{\circ} 15'$ the river Quillabamba, Urubamba, or Vilcamayo. At $11^{\circ} 18'$ it is joined by the Perene, from Tarma, which receives many waters from the Cordillera of Bombon and Pasco: having before, at $12^{\circ} 6'$, been joined from the W. by the river Jauja, also called by the

* According to La Cruz, the Apurimac rises in S. lat. $16^{\circ} 10'$, not far to the N. E. of Arequipa; and it is another branch, the Vilcamayo, of inferior length, which rises in the province of Tinta.

† This chain divides the province of Carabaya from that of Canes and Canches, Alcedo. So that the description seems applicable to the Vilcamayo of La Cruz.

‡ This bridge seems to be that mentioned by Alcedo, on the high road between Lima and Cuzco, supported on ropes, and eighty *varas* in length, being almost due W. of Cuzco, and which passes the real Apurimac according to La Cruz, while the Vilcamayo is on the E. of Cuzco.

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natives the Mantaro, a very considerable stream, falsely styled by La Cruz the ancient Marañon; but it is impossible to reconcile his map published in 1775 with this description by Estalla in 1798.*

In his description of the province of Canes and Canches,† Estalla informs us that the most considerable rivers which water that district are the Vilca or Vilcamayo, Cambapata, and the Apurimac. The first rises from the lake of Villafro, in the metallic mountains of Cailloma, in the district of Collahuas. From this small lake issue two little streams, of which one bends to the province of Lampa, and the other, increased with the water from the lake Tongafuca, and some rivers from the *Quebradas*, and augmented with a stream from the lake of Langui, becomes the Vilcamayo, and receives the second or Cambapata. This last springs from the mountains of Lampa and Carabaya, pervades the provinces of Quispicanchi, Calca, and Urubamba, and joins the other amidst the mountains of Santano. The third, or Apurimac, after joining with the Monigote or Pariguana, in Cailloma, enters into this province of Canes and Canches with so deep a channel, that it is necessary to pass it on a rude wooden bridge fastened to the rocks on each side. It then receives the rivers of Aconcagua, Cuero, Gallqui, Ocororo, Condoroma, Pichigua, and Checa, proceeding from the heights of this province of Canes and Canches; passes by a part of the district of Chumbivilcas, and, running through the districts of Paruro, Abancay, and Urubamba, pursues its course by Vilcabamba, where it changes its name of Apurimac, for that of Chapé, then receives the Pachachaca, Pampas, Suchaca, and Vilcamayo; and being augmented with the waters of the Vilcabamba, Lares, Conex, and other great streams, becomes the famous Ucaial or genuine Marañon.

* The river Mantaro, also called the river of Janja, because it waters a province of that name, rises from the lake Chinchicocha, called by the Indians Angoyacu, a name which they also give to the river. It is crossed by the bridge of Iscachaca, one of the best in Peru, built by the viceroy Canete. This river is in the map of La Cruz ridiculously called the ancient Marañon, which it only joins after a winding course of no great length; and the breadth is too much extended in his map, which is very inaccurate, even for the time, 1775. La Cruz was merely an engraver who had studied his art at Paris.

† xxi. 90.

From

natives

RIVERS.

Beni.

From its confluence with the Perene to that with the Pachitea, the Apurimac receives forty considerable rivers, among these, in $10^{\circ} 45'$, is the Paucartambo; and three leagues lower it is joined by a river of great force, which, according to our author, is the Beni, while by the map of La Cruz the Beni joins the great river Madera on the E. whence the obscurity of the geography may be conceived.* After this junction the Apurimac receives the name of the great Paro; and is joined by the Pachitea at $8^{\circ} 26'$, the Manoa at 7° . The Tapichi joins the Marañon opposite San Regis at 5° . That river, after forming a lake of about three leagues is divided into three branches, the last joining the Marañon at $4^{\circ} 25'$. Near this celebrated confluence is situated the village of Omaguas, from which to the settlement of the Laguna may be counted seventy leagues navigation, by the Marañon and Gualaga, there being no villages in this course except Urarinas and San Regis.†

The river Ucaial or true Marañon is navigable at all seasons. The first Portuguese station that occurs is Sapatinga, and the next San Pablo.‡ Loreto, a Spanish fortress, stands at the distance of twelve leagues from

* In the original Spanish relation of the voyage of father Girval, 1791, only abstracted by Estalla, there is the following note.

"Among our geographers, some contend that the Beni forms, conjointly with the Itenas, the river of La Madera; while others are of opinion, that it descends to the Marañon, with the name of Yavari. We can trace the origin of these contrarieties. The most remote springs of the Beni lie to the east of the province of Sicasica, in about 19° of latitude. It runs from S. to N. with some inflections, receiving various rivers from the mountainous territory it intersects. Among the most remarkable of these is the Coroyco, which, issuing from the province of La Paz, enters it on the west. Pursuing its course, in 13° of latitude, it throws off a branch, in an eastern direction, which enters a considerable lake, named Rogagado, having an extension of upwards of ten leagues E. W. and of five N. S. From the eastern side of this lake rises an arm which runs to the Mamori, (the river of Exaltation): and in a northern direction three others are thrown off. The one which has the greatest tendency to the west, is named *Yata the first*; the middle one, *Tamayaquibo*; and the eastern one, *Yata the second*. These branches following a north-east course, are without doubt the rivers *Yutay*, *Tesi*, and *Coari*, which, after the Ucaial, empty themselves into the Marañon [Condamine, Voy. p. 94]. The Beni having supplied this arm, flows until it incorporates itself with the Apurimac, into which it enters with an aperture of half a league, and with the name of Paro. This communication has therefore produced the errors of our geographers relative to the Beni, which is justly considered, by the above-mentioned father Rodriguez Tena, as the principal branch of all those that compose the Marañon."

† This Omaguas must be St. Joaquin. Of the Tapichi I know nothing. San Regis is on the Tunguragua, 20 leagues W. of its junction with the Marañon.

‡ Estalla xx. 192.

Sapatinga; from which latter Pevas, a Spanish village, is 74 leagues, Rivers. Napo 104, Iquitos 132, Omaguas 154, the junction of the Ucaial 164, the village of San Regis 184, that of Urarinas 224, the mouth of the Gualaga 234.

From this description and discussion, which the importance and the curiosity of the subject demanded, it will appear sufficiently clear that the great river Marañon is that styled the Ucaial by a mere manœuvre of the jesuits, in opposition to the most palpable facts and the ancient history, traditions, and present accounts of the natives; and that the river Ucaial or Apurimac ought to retain to its very source the real and just appellation of the Marañon; while to the false Marañon, in fact a tributary stream, and recent appellation confessedly erroneous, whether arising from artifice or mistake, the ancient name of Tunguragua ought to be restored. It must also be regarded as a new and important fact that the great river Beni falls into the Marañon, and not into the Madera; whence, in estimating the genuine source of the former, the Beni must also be considered; but as the Apurimac assumes a far more westerly and winding course it seems to exceed the Beni in length, and is therefore the real Marañon; and if the courses were even equal, ancient and modern fame would confirm the appellation.

The Rio de la Plata, or river of Silver, is the conjunct flood of the Paraguay, the Pilcomayo, the Parana, and the Uruguay. The main streams are the Paraguay and the Parana; and it would seem that the latter is the longest and most considerable, rising in the great mineral mountains of Brazil, lat. 19°, and bending S. then W. till it receive the Iba Parana, after which it bends S. W. till it is joined by the Paraguay, while the conjunct rivers are still called the Parana by the natives, and the Rio de la Plata by the Spaniards. Yet the length of the Paraguay, according to the map of La Cruz, does not yield above half a degree to that of the Parana; and the straitness of its course gives it the appearance of the principal river. The grand cataract of the Parana is in lat. 24°, not far from the ruined town of Cuayra; but is rather a series of rapids, for a space of twelve leagues, amidst rocks of

2. La Plata
or Parana.

RIVERS.

tremendous and singular forms.* This noble river is also studded with numerous islands; and Spanish vessels navigate to the town of Assumpcion, about 400 leagues from the sea. On the shores are often found geods inclosing crystals; but the natural history of the Parana is nearly as obscure as that of the true Marañon. The breadth of the estuary is such, that the land cannot be discovered from a ship in the middle of the stream.

3. Orinoco.

The third great river in South America is the Orinoco, of a most singular and perplexed course. According to La Cruz it rises in the small lake of Ipava, N. lat. $5^{\circ} 5'$; and thence winds almost in a spiral form; first passing to the S. E. it enters the lake of Parima, and issues by two outlets on the N. and S. of that lake towards the W. but after receiving the Guaviari, it bends N. then N. E. till it enter the Atlantic Ocean by an extended delta opposite to the isle of Trinidad; but the chief estuary is considerably to the S. E. of that island.* Many rivers of great size flow into the Orinoco; and in addition to its singular form there are other remarkable peculiarities. From the S. E. of the lake of Parima, which seems to be a kind of inundation formed by the Orinoco, the White River, called also that of Parima, joins the Black River, and thence, the great flood of the Marañon. Another stream, the Siaba, flows from the S. W. of the lake into the Black River and joins another stream, which directly connects the Marañon with the Orinoco. There is also a communication between the Black River and the Marañon, by the Joa Parana. Hence there are three communications between these great rivers; a circumstance so uncommon, that when one only had been asserted by Spanish authors, it was rejected by geographical theorists as contrary to the usual course of nature, and Condaminé was obliged to enter into a formal disquisition in order to re-establish it. A

* Dobrizhoffer, i. 206. This author, p. 188, seems rightly to assert that the Parana is the chief stream, which receives the Paraguay and Uruguay. The inundations are chiefly in December and January, rising about five or six yards above the islets. Falkner, p. 56.

* The course as delineated by La Cruz may be compared with that in the map which accompanies the description of Caracas by Depons, Paris 1806, 3 vols. 8vo., which is perhaps more exact. The most authenticated passage between the Orinoco and Marañon is that sailed by Humboldt on the rivers Negro and Casiquari. See Caracas and Spanish Guiana.

route laid down by La Cruz, that of Solano Governor of Caracas, seems RIVERS.
to confirm the authenticity of his intelligence concerning the environs
of the lake of Parima; and little doubt can remain concerning these
wonderful inland navigations, thus prepared by the hand of nature,
and which in the possession of an industrious people would render
Spanish Guiana, or New Andalusia, one of the most flourishing countries
in the world.

The other rivers of South America are comparatively of small ac-
count, the chief being the Magdalena, running N. to the Caribbean sea:
and that of St. Francis which waters a great part of Brazil. To the S.
of the great Parana there is the river Mendoza, and the Rio de los
Sauzes or river of Willows; followed in the furthest south by the Chul-
clau and the Gallegos, the last entering the Pacific opposite to the Ma-
loun or Falkland islands.

The mountains of South America constitute some of the grandest ob- Mountains.
jects in natural geography, being not only the most lofty on the face of
the globe, but intermixed with volcanoes of the most sublime and terri-
fic description. The extent is also prodigious, the Andes stretching in Andes.
one line from the capes of Isidro and Pilares, in the southern extremity
of the continent, to the Caribbean Sea, a space of not less than 4600
miles, as they generally follow the windings of the coast, at the medial
distance of about one hundred miles. The breadth is from thirty to fifty
leagues, so that entire kingdoms are sometimes situated in the moun-
tains.* The chief summits are near the equator, not far from the city
of Quito, but according to others those of La Paz.

The best account of these celebrated mountains seems to be that given
by Bouguer, one of the French mathematicians, who, 1735—1743,
measured a degree near the equator, and who has published two views of
their appearance near Quito.¹⁰ Chimborazo, the highest of these moun- Chimborazo.
tains, about 100 B. miles to the S. of Quito, and about ten miles to the
N. of Riobamba, was computed by these mathematicians to be 3217
French toises above the level of the sea, or 20,280 feet: about 5000
feet, or one quarter, higher than Mont Blanc. That part of Chimbo-

* Ulloa Mem. I. 22. Fr. tr.

¹⁰ Figure de la Terre, Paris 1749, 410.

MOUNTAINS. razo which is covered with perpetual snow is about 2400 feet from the summit. But these mountains are elevated on the high plain of Quito, which constitutes more than one-third of the computed height; so that considered as mere excrecences from the land they still yield to Mont Blanc.

The next in height is supposed to be the volcano called Cotopacsi, estimated at about 18,600 feet, and situated about twenty-five miles to the S. E. of Quito. Other grand summits are Pichincha, a few miles to the N. W. of Quito; the Altar, and Sangay, to the S. E. of Chimborazo. In general the Andes here proceed in a double chain, the interval being the plain of Quito: to the western ridge belong Pichincha, Ilinissa, Chimborazo, &c. while the eastern is crowned by Cotopacsi, the Altar, Sanga, &c. and this form continues at least for about 500 miles from the south of Cuenca to the north of Popayan." Mineralogy was at that time an unknown science; and Bouguer only informs us that the bottom is clay, and the summit a mass of stones! The American Alps clothed with perpetual snow extend a great distance further to the north, towards the junction of the rivers Cauca and Magdalena: but about two degrees to the N. of the equator they are not above one quarter the height, though they afterwards rise very considerably.*

In his account of the Cordillera of Quito, Bouguer expressly mentions that it forms two chains, like two walls; and that this form extends from the north of Popayan to the south of Cuenca. The distance between the chains is here from seven to eight leagues, forming a high table land. This circumstance is confirmed by the curious and rare map

* Bouguer, xxii.

• The mountain of Sangay is a paramo or vast desert mountain, the summit always covered with snow: it is a constant volcano, and the explosions are heard at the distance of forty leagues. Ulloa, Liv. vi. c. vii. According to Bouguer, p. l. the height of the freezing point is here 2440 toises above the level of the sea; and it would end at the height of 4300 toises, not from the cessation of cold, which on the contrary increases with the distance from the earth, but because no clouds nor vapours can ascend to a greater height. He considers, p. lv. the main chain of the Andes as terminating near the junction of the rivers Cauca and Magdalena, between which it proceeds from Popayan. The same author, p. lvi. observed stones of eight or nine feet diameter ejected from Cotopacsi to the distance of more than nine miles. On the N. E. of the Andes the rocks are perfectly horizontal, and often in grotesque forms resembling churches or castles. Similar appearances are remarked in Abyssinia. The desert summits called *paramos* in Quito are in Peru styled *punas*. Ulloa Memoires i. 121.

of Quito engraved by d'Anville for the king of Spain; * but as the MOUNTAINS.
Andes proceed further south they are often divided into three chains, forming in all a table land sometimes of fifty leagues, or one hundred and fifty miles in breadth; the three chains being sometimes linked together by transverse branches, of which particular and remarkable portions have peculiar appellations, as the Cordillera of Vilcanota, which passing N. and S. divides the viceroyalty of La Plata from that of Peru; the Cordillera of Huando, that of Ancuma, and others near the lake of Titicaca, where the chains seem particularly diversified and complex. It is to be regretted that in the map of La Cruz the grand chain of the Andes is laid down in the most broken and imperfect manner imaginable, the map being in this respect more worthy of the seventeenth century than of the end of the last, when the study of orology had begun to make considerable progress.

The highest defarts of the Andes are in the north called *Paramos*, and in Peru *Punas*; and the air is often of so intense and peculiar a cold, as rather to strike to the vitals than to affect the exterior feelings. Travelers have frequently perished; and when the bodies are found there is an appearance of laughter in the face owing to the contraction of the muscles.

Though the learned and ingenious Ulloa has been inattentive to the chorographical description of the several branches of the Andes, yet he has given some intelligence concerning them which must not be neglected. † He observes that while the high mountains may have a medial height of 14,000 feet, the table land has from eight to ten thousand: so that this prodigious belt is in itself more wonderful than the lofty summits which crown it. The Spaniards considering the mountains under two appellations, the *Sierras* and the *Andes*, it would appear that the Sierra is a name applied to the exterior ridges, while the Andes are the high central mountains. ‡ Perhaps if examined with recent and

* Paris 1750, four sheets. This map is so extremely scarce that in the catalogue of d'Anville's works, Paris, 1802, 8vo, we are told that only one copy exists in France. Nor does that writer know that it is accompanied with a Memoir on the pyramids of Quito by Condamine.

† Noticias Americanas, Mad. 1772, or 1801, 8vo. Fr. Tr. Paris, 1787. 2 vols. 8vo.

‡ But some authors reverse this order.

superior

MOUNTAINS superior skill the Andes might be found to resemble, though on a far larger scale, the mountains in the United States of America, consisting generally of three ridges, the central being usually the highest. At some distance from the Andes, on either side, one ridge only being observable, the vast upland plains, with their rivers, vallies, and mountains, would never enter into the imagination of the spectator; nor would he suspect the existence of those precipices of amazing depth, called *Quebradas* or breaks, which appal the firmest visitor as if the globe were gradually bursting into ruin. Yet in general they seem the work of the waters, as a stream commonly runs in the midst. Among the many surprising appearances of nature in the province of Angaraez, in Peru, there is a small hill, between Conacia and Vignas, which is pervaded by a rivulet, and is the only road used, passing between two walls of rock near 100 feet in height, the distance between them being only about six yards; and the walls correspond as exactly as if they had been the work of art. This excavation, says Ulloa, may be regarded as a model in miniature of the vast *Quebradas*, which are sometimes two thousand feet in depth; nay, our author has shewn that sometimes these *Quebradas* extend to the depth of 1769 Spanish varas or yards.

In these uplands the winter generally commences in December, and lasts till April, according to Ulloa, who seems only to have observed those near the equator; but in the northern provinces of the viceroyalty of La Plata, and in the Andes of Chili, the order of the seasons must of course be reversed, the heat of the summer being in December, January, and February. In the summer the heat is excessive; and affects the more as the air itself is at the same time so cold as to prevent perspiration. A distance of two feet makes summer or winter; in the sun it burns, while in the shade it freezes. Ulloa solemnly asserts that the seasons contradict the course of the sun, being solely determined by the circumstances and the force of reproduction; yet as the central rivers of the viceroyalty of La Plata, descending from the Andes on the west, are in a state of inundation in January and February, owing to the melting of the alpine snows: this observation must not be admitted in too wide an acceptance. In the *Quebradas* the air is of course far more dense and warm, than on the heights; where Humboldt and Bonpland found it so rare

that the blood burst from their eyes and mouths. While the bottoms MOUNTAINS. sometimes produce even maize, on the moderate heights, as at Guanacavelica, the *papa*, a kind of potatoe, is the sole object of cultivation. Though the greatest distance between the lowlands and the uplands do not exceed ten leagues, yet the seasons are entirely reversed. Ulloa says that in the parts which he visited, the winter, in the lowlands, continues from June to November, while at the same time on the uplands, within a journey of seven or eight hours, it is precisely the season of summer.

It would appear that the ascent to the Andes on the western side is more rapid than on the eastern, where they decline more gradually into the vast plains; but this topic has not been completely illustrated. The low country on the west is about ten leagues in medial breadth, is generally sandy, and seems to have been gained from the sea. Where there are three ridges the exterior on either side seems to be called the *Sierra*, and the table land between the Sierras is often, as already mentioned, from thirty to fifty leagues.* To the south of the town of Cuzco and the great lake of Titicaca the Andes, which had hitherto proceeded due N. from Chili, assume like the coast a different direction to the N. W., a variation accompanied with many divergences and apparent irregularities in the direction of various branches. This part of South America would be found by the orologist to be perhaps the most interesting of the Andes, and the uplands, if not the summits, probably the most elevated, as giving birth to the Apurimac or genuine Marañon, the Beni, and other prodigious streams. In the centre of a vast upland plain is the great lake of Titicaca, which receives many rivers. The temperature seems the same with that of the Sierra in general, the chief culture being *papas* which the inhabitants dry to prepare a kind of bread. Besides European cattle, sheep and goats, *pacos* and *guanacos* are said to abound, these animals thriving best in the coldest climate. According to the map of La Cruz the exterior ridges of the Andes here diverge to the length of three degrees and a half, or more than 200 g. miles,

* See the Notes of Schneider on the Memoirs of Ulloa. Fr. Tr. vol. ii. p. 157, &c. but he seems to consider the interior chain as the Sierra, and the exterior as the Andes.

whence

MOUNTAINS. whence the majesty of this wonderful table land may be conceived. *

The learned and ingenious Molina has given some account of the Andes in Chili, which being concise shall here be translated, though it were to be wished that he had been more explicit on the direction and height of the chains. †

" The marine bodies which are scattered over the country, and still more the manner in which they are disposed, are incontestible proofs that it was formerly covered by the ocean; which retiring by degrees, as may be daily observed on the coast, has left uncovered the narrow strip of land at present inhabited. All the country presents unequivocal proofs of the long residence of that element. The three parallel chains of maritime mountains, and the hills by which they are united to the Andes, in fine all the *ramifications* of this great antediluvian chain appear to have been formed successively by the waters of the ocean.

" The interior structure of the Andes themselves, whose age appears to ascend to the creation of the earth, presents a very different origin. This majestic mountain rises rapidly, only forming a very small angle with its base, the ordinary form being that of a lengthened pyramid, surmounted at intervals by little elevations of a conic form, and as it were crystalized. The enormous masses of which this grand chain is composed consist of a quartzose rock, of a composition almost uniform, and in which marine bodies are never found as they are in the secondary mountains. On the summit of Descabefado, ‡ a most elevated mountain in the midst of the principal chain of the Andes, and which in height does not appear to be inferior to the famous Chimborazo of Quito, a number of marine shells has been observed, either petrified, or calcined

* Alcedo supposes that the Andes terminate on the north in the snowy ridge of Santa Marta, while others theoretically conduct them through the isthmus of Darien to New Spain; but the lake of Nicaragua, and the irregularity of the direction of the various ridges between Darien and Oaxaca, sufficiently contradict this theory. Alcedo conceives that a great branch may extend even to Brazil, an idea since confirmed.

† Saggio Sulla Storia Naturale del Chili. Bologna 1781, 8vo. p. 67.

‡ In Lentin's Scale of the height of mountains, this only yields to Chimborazo; and the Cayambo is higher than Cotopacchi.

and probably deposited by water. The summit of this mountain, MOUNTAINS. which is flat, bears marks of a volcanic eruption; it is now a square plain, each side being about six miles in length; and in the middle is a lake of extreme depth, which, so far as can be judged from appearances, was the crater of the volcano.

"The principal chain of the Andes is situated in the midst of two others, of a smaller elevation, which run in a parallel direction. These two lateral chains are each about 25 or 30 miles distant from the principal ridge, but are connected with it by transverse ramifications, of which the age and organization appear to be the same with those of the principal ridge, although their bases be more extended and diversified. On the exterior sides of these two lateral chains, there are other ramifications of little height, and whose direction is not always the same.

"All these ridges on the sides of the Andes, as well as those more maritime or more inland, are of secondary formation. Their summits are commonly more rounded; and they are formed in horizontal beds of various substances and thickness. In all these beds marine bodies abound; and even impressions of plants and animals are often discovered. I have observed in the excavations which have been made, and in the courses of the rivers, that the lowest visible bed of all these mountains is a kind of *cos* or whetstone, of a reddish colour and sandy grain, but sometimes a quartzose sand, or a pretty compact tufa of a dark brown colour. The other beds are clays of different colours, marls, marbles of several kinds, schistus, spars, gypsum, fossil coal, &c. after which appear metallic veins, oker, quartz, granite, porphyry, sandstone, and other rocks more or less hard.

"The order of the beds is not always the same, and I have often observed considerable derangements; a superior bed in one mountain being inferior in another: and in these derangements the laws of gravity are by no means observed. Nevertheless all the beds in general affect a kind of regularity in their direction, which is from S. to N. and as they incline a little to the west according to the fall of the sea, they seem to have followed the current of the ocean, which, on account of the position of the country, is from S. to N.

MOUNTAINS. " Besides the mountains composed of different beds, there are some of uniform structure, or homogeneous beds of limestone, gypsum, talc, cor or whetstone; of granite, of simple and primitive rocks of basalt, lava, and other volcanic substances; and some of shells little or not at all decomposed, as mentioned by Ulloa in his voyage. But all these homogeneous mountains are barren, only producing some languishing shrubs; while the mountains disposed in beds, which are always covered with a crust of good soil, present a vigorous and agreeable vegetation.

" The exterior form of all the stratified mountains furnishes another palpable proof of the incumbence of the ocean, their bases which are almost always extensive enlarging gradually form gentle vales, whose inflections and inclinations impress in a lively manner the long abode and direction of the ocean. Their salient and retreating angles also correspond. On descending into these vales may be perceived without difficulty that the organization is the same with that of the stratified mountains, as the same materials and disposition appear throughout, with this difference that almost all the substances are decayed or even reduced to earth."

A practical German mineralogist, employed for some years in the mines of Peru,* informs us that the eastern spurs of the Andes sometimes present red and green granite, and gneiss, as towards Cordova and Tucuman; but the Grand Chain chiefly consists of argillaceous schistus, or various kinds of thick slate, bluish, dark red, flesh colour, grey and yellow; on which, in many places, are incumbent strata of limestone, and large masses of ferruginous sand-stone. Neither in Hungary, Saxony nor the Pyrenees, had our author beheld mountains so irregular as the Andes, or broken into such alternate substances, revealing some prodigious revolution of nature. Amid the argillaceous schistus the metals sometimes occur in veins of quartz, sometimes in alluvial layers of sand-stone and iron sand. Near Potosi are irregular

* Tagebuch einer Reise, &c. A Journal of a Journey through Peru, from Buenos Ayres on the great river La Plata, by Potosi to Lima, the Capital of the Kingdom of Peru. By Anthony Zacharias Heims, Royal Spanish Director of Mines. 8vo. pp. 300, Dresden, 1798.

beds of large balls of granite; and the celebrated mountain, so rich in silver ore, is chiefly composed of a firm yellow argillaceous slate, full of veins of ferruginous quartz, in which some of the best ores are found. In passing the highest ridge of the Andes, between Potosi and Lima, Helms still found argillaceous schistus the predominant substance; sometimes with strata of sand-stone, sometimes with long extents of granite. Near the lake of Titicaca the Andes are of prodigious height, (this being the centre of the chain, and probably exceeding the summits near Quito); and Helms observed in some places the basis of argillaceous schistus covered with alluvial layers of marl, gypsum, limestone; sand, fragments of porphyry, and even rock salt; yet rich silver occurs in abundance. Near Guancavelica the mountains are chiefly sand-stone, or limestone; but still equally high, and equally opulent. To the north of this place the ridge for a hundred miles, is said to be calcareous, yet fertile in metallic ores. According to our author the summits near La Paz are the highest of the Andes; but he did not travel so far as Quito.

In several European countries the metals chiefly occur in argillaceous schistus; but it is surprising to find this substance predominate in so lofty and extensive a range as the Andes, where upon the common theories granite might have been expected. It may be conjectured that this is the work of that prodigious subterranean fire issuing from so many volcanoes, and here, as would seem from the eruptions of mud, combined with subterranean waters; for this mud is the very matter of argillaceous schistus, and thus ejected during thousands of years has become superincumbent on the granite, which will probably be found on sinking deep shafts, and is perhaps the principal substance in such parts as are not volcanic. But on the contrary the eruptions of mud may proceed from a dissolution of the primitive schistus; and in the formation of this globe nature seems to have studiously concealed her process: while from the attempts which have been made, we can only conclude that the reverse of the best theories may perhaps approach the truth.

MOUNTAINS
Other chains.

According to the account of Humboldt, a Prussian naturalist, who has lately visited a considerable part of South America,* there are three other remarkable chains of mountains which proceed from west to east parallel to the equator; and which by their height deserve the attention of naturalists, as much as the Carpathian mountains, or the Pyrenees, though it have been supposed that, on the east of the Andes, iramense plains extend to the shores of Guiana and Brazil, and even to Buenos Ayres and Patagonia.

1. That of the Northern Coast, between nine and ten degrees of north latitude.

2. That of Parima, or the chain of the cataracts of Orinoco, from three to seven degrees N. lat.*

3. The chain of Chiquitos, between 15° and 20° of S. latitude.

Northern.

The most northern, or that of the coast of Venezuela, is the most lofty, but the narrowest. From the high plain of Quito the great chain of the Andes extends, by Popayan and Choco, on the west of the river Atrato, towards the Isthmus, where on the banks of the Chagre, it only forms mountainous land about 1200 feet high. From the same Andes proceed several branches, one called the Sierra de Abibe towards the province of St. Marta†. This chain of the coast is restricted, as it approaches the gulf of Mexico, and cape of Vela, and afterwards runs due east towards the mountain of Paria, or even to the Isle of Trinidad. The greatest height is in the two Sierras Nevadas of St. Marta, and of Merida‡. The first being near 5000 varas or Spanish yards, and the second 5400 varas, about 2350 toises, or 14,000 feet English, above the

* Journal de Physique, Messidor an. ix. July 1801.

* These cataracts are at Maypura and Atures, N. lat. 6° in the map of La Cruz; the Spanish term for a cataract being *raudal*, which rather implies a *rapide*.

† The mountains of St. Marta are covered with snow and visible from the sea. Ulloa lib. i. c. 1.

‡ Our author's latitudes do not correspond with the map of La Cruz, who gives the Nevada of Merida between lat. 8° and 9°. Humboldt is an advocate for perpetual ranges. He should have said that a branch, the Sierra de Piriho, stretches towards Vela; while another chain extends N. E. giving source to many rivers, which flow into the Orinoco from the north; and perhaps winds along the shore to Paria.

Condamine, in sailing down the Marañon, did not observe one hill for the space of two months after leaving the Pongo, till he saw the mountains of Guiana giving source to rivers that run N. and S.

sea. Several mountains of this chain are perhaps equal in height to MOUNTAINS. Mont Blanc; perpetually covered with snow, and often pouring from their sides streams of boiling sulphureous water: and the highest peaks are solitary amidst mountains of little height, that of Merida is near the plain of Caracas, which is only 260 feet above the sea. The vallies in the branch on the west of the Lagoon of Maracaibo are narrow, and run from north to south. That part which extends from Merida to the east has vales running east and west, formed by parallel ridges, one of which passes to cape Codera, while the second is three or four leagues further to the south. Our author supposes that the wide plains were formerly lakes; but is too fond of bending nature to his theories, while he ought to have been content with the observation of facts.

The general height of the chain of the coast is from 6 to 800 toises, the Nevada of Merida, as already mentioned, 2350, and the Silla de Caracas 1316: lowering towards the east, cape Codera is only 176 toises. But this depression is only of the primitive rock, for there are secondary calcareous mountains from Cape Unara, which are higher than the gneiss, or foliated granite, and the micaceous schistus. These calcareous mountains covered with calcareous freestone, follow this chain on its southern side, and increase in height towards the eastern point of the continent. The chain of the coast is more steep towards the north than the south; and there is a dreadful perpendicular precipice of 1300 toises in the Silla de Caracas, above Caravelledo, the northern part of this chain being perhaps broken by the gulf of Mexico.

The Second Chain, that of Parima, or of the cataracts of Orinoco, is Of Parima. little known, and was scarcely esteemed passable till within these thirty years, since the expedition of Ituriaga and Solano. The volcano of Duida is in lat. $3^{\circ} 13'$. This chain leaves the Andes near Popayan, and stretching west to east, from the sources of the Guaviari, appears to extend to the N. E. of that river, forming the cataracts of Maypura and Atures in the Orinoco, lat. 5° , which are truly dreadful, but present the only passage yet opened towards the vale of Amazons. Thence, so far as can be judged from our author's confused description, this chain continues its course N. E. to the river Caroni, the breadth being sometimes not less than 120 leagues: Humboldt must mean that branches occur of

MOUNTAINS.

that length. Further to the east* the continuation is little known. The ferocity of the Guaicas and Guajaribos forbade any approach beyond the little cataract on the east of Chiguera, but Don Antonio Santos, disguised as an Indian, passed from the mouth of the river Caroni to the little lake of Parima, and disclosed the continuation of this range between 4° and 5° N. lat. where it is about 60 leagues in breadth, dividing the waters which fall into the Orinoco and Esquibo from those that fall into the Marañon. Further to the east this range becomes still wider, descending south along the Mao, where the Dutch style a part of it Dorado, or the mountain of gold; being composed of bright micaceous schistus, which has given a like reputation to a small isle in the lake of Parima. To the east of the Esquibo this range takes a S. E. direction, and joins the granitic mountains of Guiana, which give source to the river of Surinam, and others. This last group of mountains is of great extent, the same gneiss being found at $8^{\circ} 20'$ and $2^{\circ} 14'$. This wide range is inhabited by a number of savage tribes, little or not at all known in Europe.† No where does it seem to rise to an equal height with the northern range of the coast, the mountain of Duida, not far from Esmeralda, being reputed the highest, and, measured by Humboldt, was found 1323 toises above the sea; but it is a picturesque and majestic mountain, ejecting flames towards the end of the rainy season, and situated near a beautiful plain, covered with palm trees and ananas. Towards the east it seems to expire in broken rocks; but there is no appearance throughout of any secondary strata, the rocks being granite, gneiss, micaceous schistus, and hornblend slate.

Of Chiquitos.

The third chain of primitive mountains, or that of Chiquitos, is only known to our author by the accounts of those who have passed the Pampas. It unites the Andes of Peru and Chili with the mountains of Brazil and Paraguay, stretching from La Paz and Potosi and Tucuman, through the provinces of Moxos, Chiquitos, and Chaco, towards the government of the mines, and of St. Paul in Brazil. The highest sum-

* He says between 68. and 60. W. long. from Paris.

† Our author's subsequent remarks shew that he was then a stranger to the great map of La Cruz; and nothing can be more confused than his whole account, in which branches of mountains are confounded with the main chain.

mits appear to be between 15° and 20° ; the rivers there passing N. to the Marañon, or S. to La Plata. This grand ridge seems chiefly in a semi-circular form, and probably causes the rapids of twelve leagues on the Parana, as already mentioned. MOUNTAIN.

Between these three great ridges are, according to our author, three immense vallies, that of Orinoco, that of the Marañon, and that of the Pampas of Buenos Ayres, from 19° to 52° S. lat. all opening to the east, but shut on the west by the Andes. The middle valley, or that of the Marañon, is covered with forests so thick, that the rivers alone form roads; while those of Orinoco and Pampas are savannas, or grassy plains, with a few scattered palms; and so level, that sometimes for 800 square leagues there is no inequality above eight or ten inches in height. In the northern plain the primitive rock is covered with limestone, gypsum, and freestone; while in that of Marañon the granite every where rises to day. The general inclination is to the N. W. which, according to our author, is the usual arrangement of primitive rocks. Petrifications are uncommon even in the Andes, where there are sometimes patches of gypsum, and secondary limestone; while the range of Parima consists entirely of granite and other primitive rocks. But in a calcareous freestone of the northern ridges of the coast, Humboldt found vast numbers of shells, seemingly of recent petrification, as they are those of the sea now nine leagues distant. The belemnite and ammonite seem unknown, though so common in Europe. In the plain of Orinoco petrified trees are found, in a coarse breccia.

Among the primitive rocks Humboldt mentions granite, which forms the chain of Parima: while in that of the coast it is covered, or mingled with gneiss and micaceous schistus. It is sometimes stratified in beds, from two to three feet thick; and sometimes contains large crystals of felspar. The micaceous schistus sometimes presents red garnets, and sappare; and in the gneiss of the mountain of Avila green garnets appear. Sometimes nodules of granite are found in the same substance, or in gneiss, consisting of finer grains gathered by some local attraction. In the range of Parima there occur large masses of most brilliant talc, formerly imparting such reputation to the Dorado, situated between the rivers Esquibo and Mao, and other mountains, which, like burnished gold, Construction.

MOUNTAINS.

gold, reflect the light of the sun. If Sir Walter Raleigh had reflected that all that glitters is not gold, he might have saved his own voyage to El Dorado. Smectite or soft jad is formed into idols; and Condamine discovered that variety of hard jad called Amazon stone, a name idly applied to the blue felspar of Siberia. Schistose chlorite also occurs; and beautiful hornblend slate rises through the streets of Guiana, or S. Thomè. Other substances are, decomposed felspar or kaolin, primitive limestone, plumbago; and there are veins of quartz which contain auriferous pyrites, and antimony, native gold, grey copper, and malachite. The copper mines of Aroa are alone worked, producing about 1500 quintals yearly. Slate is rare, but sometimes covers the micaceous schistus; and in the northern chain there are rocks of serpentine, veined with blueish steatite. The grunstein of Werner sometimes occurs in that ridge. Among the rocks called transitive by Werner, as connecting the primitive with the secondary, are trap, green slate, amygdaloid, and the schistose porphyry of that author, green with crystals of felspar. The secondary rocks are limestone, gypsum, argillaceous schistus, and freestone or calcareous sandstone, with coarse breccia.*

In the subsequent description of South America, the Spanish dominions will of course occupy the first place; and are followed by the Portuguese, French, and Dutch. A description of some native nations, with an account of the recent discoveries, shall be succeeded by a short view of the islands belonging to this part of the continent.

* At the end of Humboldt's paper is a sketch or drawing of a primitive and secondary rock, of the chain of the coast, and that of Parima. Both rest on massive granite often mingled with jad and plumbago. This is followed, in the Primary, by foliated granite, micaceous schistus with garnets, primitive slate with beds of native alum, slate mixed with hornblend, grunstein (which he calls primitive trap), amygdaloid, while the summit is schistose porphyry. In the Secondary, the mass of granite is surmounted by gneiss, with beds of primitive limestone; the micaceous schistus with schistose plumbago, and limestone; the same with beds of Lydian stone and petrosilex, gypsum, calcareous freestone. His plumbago seems to be hornblend.

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SPANISH





SPANISH DOMINIONS IN SOUTH AMERICA.

THE Spanish dominions in South America, themselves an empire, are divided into three viceroyalties, La Plata, Peru, and New Granada. The inferior governments are that of Caracas, which from its position may be described in a supplement to New Granada; and Chili, itself a settlement of no small importance. The work of Estalla supplies materials sufficiently ample for a recent description of these important colonies, and shall be used as the chief foundation, the accounts in other works being often antiquated and erroneous. *

CHAPTER I.

THE VICEROYALTY OF LA PLATA OR BUENOS AYRES.

Extent.—Provinces.—Government.—Revenues of Spanish America.—Population.—Manners.—Cities and Towns.—Commerce.—Natural Geography.

THIS grand viceroyalty, though erected so lately as 1778, is not only the most important of all the divisions, but that by which the chief opulence of the Spanish dominions in South America passes to the

* Useful assistance may also be derived from Coletti, *Dizionario Storico Geografico dell' America Meridionale*, Venezia 1771, 2 vols. 4to. the author having resided many years in South America. The great work of Alcedo, Madrid 1786, 4to. must also be consulted. The two works of Molina concerning Chili are inestimable.

EXTENT.

parent country, and is interwoven with the commerce and interests of Europe. Including the savage Chiquitos and Mojos in the north, and extending to the southern limits of Tuyu and the wide plains called the Pampas, its length from the chain of Vilcanota to near the river Negro may be assumed from 14° S. lat. to near 38° , that is 24 degrees or 1440 g. miles.* The breadth, which is generally pretty equal, may be computed at 12 degrees or 720 g. miles. Estalla computes the extent at 1000 Spanish or rather American leagues, (but seems vaguely to include Chili,) and the greatest breadth at 350, forming a triangle of a thousand leagues in height, on a base of 350, equal to 175,000 square leagues; which might he adds support 50,000,000 persons, while there is in fact scarcely one million of civilized inhabitants, and a handful of savages†.

Provinces.

Before the erection of this viceroyalty most of the jurisdiction belonged to that of Peru, although the three provinces of Buenos Ayres, Paraguay and Tucuman were considered as *Capitanias Generales*, that is the governors had an authority independent of the viceroys of Peru, except in instances of great importance and difficulty. The part of Peru now annexed to La Plata was divided into well known provinces or districts; and the missions of the Chiquitos, Mojos, and Guaranis formed three distinct governments.

When this new viceroyalty was proclaimed the form of government remained the same, the title alone being changed. The ordinance of his catholic majesty for the subdivision of the viceroyalty was issued in

* See Estalla xx. 147. whence it appears that the boundary between La Plata and Peru is now the Cordillera of Vilcanota, dividing the province of Carabaya in La Plata from that of Canes and Canches in Peru.

† Estalla xxvii. 295. The wide Spanish possessions in America are divided into four viceroyalties, Mexico, Peru, La Plata, and New Granada; and six captaincies general or governments, Porto Rico, Havana, Caracas, Guatemala, Chili, to which, in point of commercial connection, is added the Philippines in Asia. Deponi, ii. 9.

The Audiences are Guadalajara, Mexico, Guatemala, Panama, Caracas, Bogota, Quito, Lima, Charcas, Santiago of Chili, Buenos Ayres. To these may also be added, that of Manila, in the Philippines, forming twelve in all; a number familiarly marked by the Spanish writers.

1782, and appointed nine Intendencies. * But in a geographical description an enumeration of the principal provinces will be the clearest method, and the progress shall be made from the south.

- | | |
|------------------------------|--|
| 1 <i>Pampas</i> | 16 <i>Plata</i> |
| 2 <i>Tuyu</i> | 17 <i>Santa Cruz de la Sierra</i> |
| 3 <i>Buenos Ayres</i> | 18 <i>Chayanta</i> |
| 4 <i>Cordova</i> | 19 <i>Oruro and Paria</i> |
| 5 <i>Cuyo and Mendoza</i> | 20 <i>Carangas</i> |
| 6 <i>Charcas</i> | 21 <i>Pacajes</i> |
| 7 <i>Guarani</i> | 22 <i>La Paz</i> |
| 8 <i>Paraguay</i> | 23 <i>Cochabamba</i> |
| 9 <i>Chaco</i> | 24 <i>Sicasica</i> |
| 10 <i>Salta</i> | 25 <i>Laricaja and Omashuyos.</i> |
| 11 <i>Jujuy</i> | 26 <i>Chucuito</i> |
| 12 <i>Chichas and Tarija</i> | 27 <i>Puno or Paucarcola</i> |
| 13 <i>Lipes</i> | 28 <i>Lampa</i> |
| 14 <i>Atacama</i> | 29 <i>Afugaro</i> |
| 15 <i>Potosi or Porco</i> | 30 <i>Carabaya, the last province of</i> |

La Plata on the N. of the great lake of Titicaca, and divided as already mentioned from the Peruvian province of Canes and Canches by the grand chain of the Cordillera called Vilcanota. †

In the obscurity of the geography of the Spanish dominions, it may not be unuseful to offer some remarks on particular provinces, a plan which would in other cases more strictly belong to chorography.

Estalla has given brief descriptions of what he calls the upper and inferior

* Estalla says that this viceroyalty is divided into nine Intendencies, namely Buenos Ayres comprising the whole of that bishopric. The bishopric of Tucuman embraces two Intendencies, that of Salta, and that of Cordova, to which is joined the province of Cuyo y Mendoza, which in spirituality is subject to the bishopric of Chill. In former Peru there are five Intendencies, Potosi, Plata, Puno or Paucarcola, La Paz, and Cochabamba on the S. E. of La Paz. From the remainder of his description, which is rather confused, it would appear that Santa Cruz de la Sierra forms the ninth Intendency, but there is also an Intendent of Paraguay. xxvii. 296.

† Alcedo, though he wrote in 1786—1789, is an utter stranger to the new divisions of La Plata, and too often uses antiquated materials. Some little districts are here omitted.

PROVINCES. ferior parts of the viceroyalty.* The former is peculiarly rich in the precious metals, only yielding to Mexico in this respect: he specially mentions the Cordillera of Lipes; and to Porco belong the celebrated mines of Potosi. The metals of Oruro and Paria are also celebrated. The provinces most rich in gold are Laricaja and Carabaya; while those that produce the greatest quantity of silver are Lampa, Puno, Chucuito, Oruro, Chayanta, and Chichas, not to mention the celebrated Potosi. Carangas and Pacajes are celebrated for the breed of Pacos, which are used as beasts of burden. Lampa and Asangaro are noted for the produce of wool, the sheep in the former being estimated at near a million. These districts with Chucuito also rear cattle and horses.† In the provinces of Salta and Jujuy, mules form a prodigious article of trade, supposed to yield 200,000 dollars annually. Cochabamba produces abundance of wheat and maize, so as to supply Oruro, La Paz, and other upland provinces. Santa Cruz de la Sierra, which ranks among the warm regions beneath the chain of mountains, trades in honey, sugar, and bees.

In the lower part of the viceroyalty, Estalla observes, that the province of Buenos Ayres comprehends three other cities, besides the ca-

Though Alcedo have not unhappily in his dictionary, distinguished the several provinces of the new viceroyalty, yet he has, in an appendix to the last volume, given the following list.

<i>Gobiernos.</i>	
Buenos Ayres	Puno
Chucuito	Paz
Tucuman	Potosi
Santa Cruz de la Sierra	Chiquitos
Montevideo	Mojos.
Paraguay	
<i>Corregimientos.</i>	
Mizque	Apolabamba
Paucarcolla	Atacama
Pilaya y Paspaya	Asangaro
Pumabamba	Carabaya
Yamparaen	Carangas
Cochabamba	Tarija
Chayanta	Porco
Larecaja	Oruro
Lipes	Omasuyos
Paria	Sicaica
Pacajes	Tomina.

* xxvii. 313.

† lb. 309. He adds Chumbivilcas, which is in the viceroyalty of Peru.

pital, namely Montevideo, Corrientes, and Santa Fé. The chief products of this province are beeves and mules. Cordova is chiefly celebrated for woollen manufactories, being seated on the eastern side of a grand and high branch of the Andes. Mendoza, formerly a town of Chili, also adjoins to the mountains. The rivers in these parts are mostly torrents which swell with the rains, but at other times they are left nearly dry. Several are lost in lakes and marshes, in the wide plains of Chaco.

The name of Tucuman, according to our author, is superannuated, and that town is now in the Intendency of Salta. The province of Cuyo lies amidst the mountains which extend from the great chain towards Cordova, but there are many fertile valleys; being separated from Chili by the Andes, the administration is annexed to that of Cordova. Cuyo produces in great abundance grapes, figs, pears, apples, and most kinds of European fruits, which form the chief articles of its trade. Wines, brandy, and dried fruits are also carried to Buenos Ayres, Cordova, and other parts of the four Intendencies. The wines differ considerably from those of Europe, but are preferred for daily use. It is said that Mendoza and San Juan de la Frontera have exported in one year more than 20,000 barrels of wine, which brought 200,000 dollars. These with the brandies therefore form a considerable property. The mountains of Cuyo and Rioja also abound in metals; but the passes being more difficult than that of Mendoza, there is no inducement to work them.* In the northern part of the same chain, are many flocks of the vicunas, whose wool is sometimes wrought in the country, but chiefly sent to Europe, where it is celebrated as the first of all in broad cloths, uniting the gloss of silk, with the firmness and warmth of woollen, while the native fawn-colour can scarcely be exceeded in beauty.

The villages of the Guaranis, which compose a government called that of the Missions, amount to thirty, from the river Tebiquari in Paraguay to the frontiers of Buenos Ayres, being mostly to the E. of the river Parana; the eastern borders of the Guaranis extend along Brasil, while on the W. they border on Paraguay, Corrientes, and Santa Fé.

* Mendoza draws great wealth from the prodigious mine of Upat. See Chili.

PROVINCES. The grand and fertile province of Paraguay has not been described by Estalla, but the defect may easily be supplied by the excellent work of Dobrizhoffer.* Though this province produce none of the precious metals, it is one of the most opulent in the new viceroyalty, from its vegetable productions, and from the prodigious herds of horses, mules, cattle and sheep, which enliven its extensive plains. The northern parts of Paraguay have however been little explored, as the settlements of the jesuits were chiefly in the southern skirts, and among the adjacent Abipons and Guaranis.

The Pampas, or vast plains of Buenos Ayres, extend from the sea coast on the E. to that great chain which forms the beginning of the Cordillera of Chili, about 140 leagues W. from the city of Buenos Ayres. Towards the S. they stretch about 100 leagues to a chain proceeding W. N. W. from the Atlantic. The northern boundaries are not distinctly known, but the name of Pampas is chiefly applied to the territory on the S. of Buenos Ayres, Cordova, and Mendoza. These vast plains, like the Stepps of Russia, having scarcely any elevations, the view, as at sea, is terminated by the horizon. They are only diversified with paths and ditches, which collect the rain waters, and which commonly end in lakes, as there is no declivity; yet there are wide tracks in which no water is found, nor is that element pure, and trees are extremely rare, except a few shrubs round the lakes. Hence this region is only inhabited by a few wandering savages. The soil is generally a black earth, but of little depth, and is followed by a kind of coarse white chalk, so that it is difficult to form wells as the water can scarcely pass so tenacious a substance. The chief pasturage is clover, and in the best parts, sometimes so strong as to impede the step of a horse; it is much liked by the cattle, who, when there is water, multiply prodigiously in the Pampas. The savages who roam through these deserts sometimes surprise Spanish caravans, and small settlements.

* *Historia de Abiponibus*. Viennæ, 1784, 3 vols. 8vo. The lively singularity of the old man's tale is itself an amusement; and though sometimes garrulous he is redundant in authentic and uncommon observations. His work, though bearing a restricted title, is the best account yet published of the whole viceroyalty of La Plata. When the order was crushed, he seems to have ceased to have been a jesuit.

The province formerly called Tucuman, now divided into those of PROVINCES. Salta and Cordova, forms an interesting part of the new viceroyalty which Estalla has described at some length: though being inland it had rather escaped observation. * These provinces are well watered, and in some places produce wild cochineal: but it would seem that this is a different species from the true cochineal. As the American tiger, or rather jaguar abounds, travellers are deterred from further researches, especially as they might easily be lost in the perplexed and devious paths. In the jurisdiction of San Miguel of Tucuman is found the tree called *quebracho*, a name derived from its extreme hardness, which breaks the axe. The outer part is white, but the centre red; and the latter after being steeped in water becomes hard and heavy like stone. In the same province are found spiders, which weave a thread of great strength and beauty. A league to the S. of San Miguel is the salt river called Sali. That town is remarkable for the manufacture of a kind of cars or carts, used in transporting articles of commerce. The city of Salta is noted for a great concourse of merchants in the months of February and March, though in the rainy season the roads are scarcely passable; the surrounding vale of Lerma produces excellent wheat and abundant pasturage, but the poor are tormented with a kind of leprosy. The graziers who deal in mules, and the merchants, chiefly Gallicians, are robust, and the women are remarkable for their beautiful complexions and flowing hair. Yet the sex is subject, after the age of twenty-five, to a swelling in the throat, called *coto*, producing an effect very strange and ridiculous, and which is carefully concealed with neckcloths, but attended with no disease nor abbreviation of life. This deformity seems to belong to the goitre, a disorder formerly believed to be restricted to the mountains; but as Salta stands in a valley, it is probably produced by the water or the fogs. Our author adds that the province of Tucuman was the largest in America, extending from the corner called La Guardia to the river of Quiaca, 380 leagues; of which 314 are fertile lands with carriage roads, and the remaining 66 barren country with horse paths. As far as Jujuy the temperature is benign, inclining to the warm and humid, and travellers find much convenience and abundance of provisions. A

PROVINCES. kind of large crow is hunted, and an animal between a hare and a rabbit. There are said to be no less than twelve kinds of bees, all producing honey of different qualities. The chief drink is called *aloja*, but our author does not explain its ingredients. * Throughout the province, according to our author, there is no person so poor that he does not kill a cow or a heifer every day for the support of his family. †

Government. The government of the Spanish colonies in America has always been conducted with superlative prudence, except with regard to the number of the clergy and monastic institutions. The College of the Indies, generally consisting of the most enlightened men in Spain, has greatly contributed to the wisdom of the administration. While the French colonists look upon their abode in a distant country, as only a temporary source to procure means of existence in France, Spain has, by a very different policy, excited the colonists to remain in the new territories, and has held out every advantage for that effect, which their avarice or vanity might have received at home. Even the titles of

* It is the *chica* made of maize.

† In the *Mercurio Peruano* there is an inflated description of the province of Chichas and Tarija, of which Estalla, vol. xxi. has given an extract. The chief products are wood, corn, sheep, guanacos. Some districts are rich in mines. But the vallies of Tarija, about a hundred leagues to the N. of Pasco, are celebrated for the serenity of the sky, beautiful climate, and the fertility of the soil, watered by abundant streams. Wheat, maize, the tea of Paraguay, the cocoa, the vine, and the flax, abundantly reward the labour of the cultivator. The towns of San Bernardo and San Lorenzo are flourishing settlements, abounding in cattle, sheep, and swine. It is supposed that the district of Tarija exports annually about 10,000 beeves, each valued at from eight to ten dollars. Yet the women are more industrious than the men; and with their vigorous forms and carmine cheeks are alternately occupied in the fields and the labour of the distaff and the shuttle. The river Bermejo was navigated in 1790 to its entrance into the Paraguay, twenty-four leagues to the N. of the city of Corrientes. In the town of Tatañ, in Chichas, it is said that a furious madness sometimes attacks both men and beasts, and has been imputed to the vapours of the mineral mountains. Near Tascora large bones and teeth have been found, either remains of the American mammoth, or of the unknown animal called *megalomys*, by zoologists, and of which an entire skeleton was found in Paraguay. See the plate and description in the *Essai de Geologie* of Faujas, Paris, 1803, 8vo. This province was formerly seized by the Chiriguanoes, who intercepted the commerce between Peru and Buenos Ayres, and is now included in the Intendency of Potosi. Tolina presents mines of gold; but the chief are those of Choroma and Estanca. Santiago de Cotagaya chiefly supplies charcoal to Potosi; and is a place of no consequence, while the delicious vales of Tarija have been compared with those of Granada in Spain; and in some districts excellent wine is made. The new town of Oran, in the valley of Senta, was founded in 1792, and already contains 800 souls, who possess numerous flocks, so that a savage spot has been converted into a considerable colony.

Castile,

Castile, and the badges of knighthood, appear as brilliant in the colonies as in the parent country; and the ecclesiastic titles of archbishop and bishop have been scattered with profusion. A rich colonist may, without leaving his domains, be created a duke, a marquis, or a count; and rather chooses to display his new star among his inferiors in rank, than to lose its rays in the milky way of the Spanish grandees.

In the French colonies the want of foresight and of policy has become proverbial even among their own writers. Most of them have been ruined by the impetuosity of the national character; by rash and imprudent ordinances, issued at Paris by utter strangers to the subject; or by foreign conquest caused by their internal weakness. The few which have remained, may rather have existed from external causes, than from any prudence in the measures or capacity in the management.

The most important English colonies have assumed their freedom, and become an independent empire. But it is doubtful if this grand revolution would have happened, if the richest proprietors and leading men had been attached to the court of London by the attainment or expectation of hereditary dukedoms, marquisesates, and earldoms, means employed at home with such powerful effect. Yet this idea seems never to have entered the imagination of any English monarch or minister.

While therefore admitting the destructive impolicy of the clerical preponderance, which however subdues the spirit of the people, and forms in itself a most powerful chain of subjection to the parent country, we are induced to admire, in other respects, the profound policy of the Spanish colonial administration, it may be matter of wonder that the grand measures of commercial freedom, and the erection of the viceroyalty now under consideration, should have been reserved for the same recent epoch. For nothing could have been more consonant to sound policy than to throw the preponderance in South America into that portion, which was the most easily accessible from Europe. The wisdom of this measure was however at length perceived; and La Plata has arisen on the diminution of Peru, a colony of difficult access either by land or by sea. The wealth of her mines, no longer entrusted to the tedious and difficult passage by Cape Horn, now passes on caravans of mules, from Potosi and the eastern side of the Andes to the port of

Buenos

VOL. III.

3 2

Castile,

GOVERN-
MENT.

Buenos Ayres; and wide plains, formerly desolate, or haunted by a few wandering savages, have become the lively thoroughfares of prodigious commerce, and are studded with numerous towns and villages. The astonished traveller passes on a mule, or in a car, from the Atlantic Ocean to the confines of Peru, a space of 1200 miles, through a country which, a century ago, might have dismayed an army and a bold leader, but may now be passed like the plains of Hungary amidst fertility and civilization. The maritime trade of Peru chiefly passes to the shores of Guatemala and Mexico, which are all easily accessible from Europe.

Viceroy.

The important government of La Plata is entrusted to a viceroy, who has also the title of captain general, with an assessor, and a fiscal.* There is also a secretary, in the entire confidence of the viceroy, and who retains three principal clerks. The jurisdiction of the viceroy extends to the whole political management, except the royal treasury, over which he has no authority. In the military department he is commander in chief under the sovereign.

The assessor is also auditor, or supreme judge; and his military jurisdiction is that of captain general of the veteran troops, for the militia is wholly subject to the viceroy. When the viceroyalty was established it was ordered that the Peruvian model should be followed; yet, among the guards, the halbardiers and calvary have been omitted, an arrangement which diminishes the idle pomp without injuring the power of the viceroys of La Plata. A more military style has also been adopted, the fortrefs at Buenos Ayres being regularly garrisoned with a detachment of grenadiers, of whom one centinel is placed at the bottom of the staircase, and the other at the door of the saloon. The want of the guard of cavalry is supplied by a select band, who regularly accompany the viceroy, two riding before and four behind, and who also carry his orders on particular occasions. The salary of the viceroy is 40,000 dollars; but after deducting the half year, and other casualties, there remain about 30,000. He is nominated for three years; and if the term be prolonged, the half year is again deducted. The salary of the as-

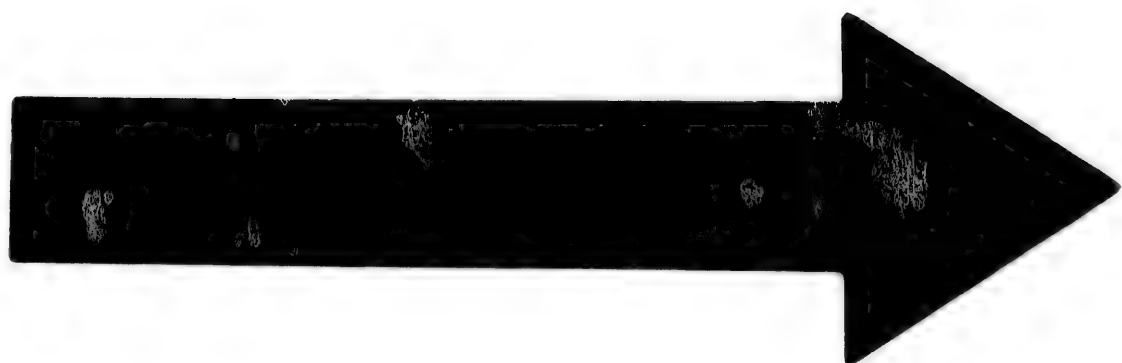
* *Estad. xxvii, 288.*

fessor,

essor, fiscal, and secretary is each between two and three thousand dollars. The viceroy is supreme president of the Royal Audience of Charcas, and also of the new Royal Audience, erected in 1785, at Buenos Ayres. He exercises the royal vice-patronage, and in that capacity has a grand seat and canopy in the cathedral, where he is treated with the same ceremonies as are paid to the monarch. He approves the nomination of the curates; and his jurisdiction extends to the monasteries in extraordinary cases. He confirms the election of the magistrates of the cities; and the governors of provinces are his sub-delegates. He is the supreme head of the police, and superintendant of the revenue of the post office, under the first minister of state, who is postmaster general throughout the Spanish monarchy. VICEROY.

The royal treasury acknowledges as chief the Intendant of the army, a kind of paymaster general. His salary is 5,000 dollars, and he presides over the tribunal of accounts, composed of three chief accountants. He audits all the accounts of the viceroyalty. In difficult cases he has an assessor fiscal, and notary. The essential branches of the administration of the royal treasury at Buenos Ayres are the customs, the deposits of tobacco, playing cards, and stamped paper. The ecclesiastic revenue arising from vacancies, subsidies, and tythes, is of little consequence, and generally applied to pious purposes. The customs were regulated in 1777, and the deposits of tobacco in 1781, the first yielding to the crown at least half a million of dollars clear of expence. The monopoly of tobacco has sometimes yielded 100,000 dollars a year. The stamped paper and cards are of little consequence. TREASURY.

Similar duties are exacted in the principal cities of the viceroyalty, and four per cent. arises from the sale of merchandise. But the chief branch of revenue is the duty called *quintos*, though in fact the *tenth* only of all the metals. Quicksilver, on account of the king, is exported from Spain, as the mine of Guantavelica is exhausted. There is also a capitation tax from eight to ten dollars each person. But the royal expences are very great, in comparison to what they were before such numerous offices were annexed to the royal treasury, which is even sometimes in arrear. The pay of the military, the expences of the sales, and the salaries of the officers of the customs and of tobacco, are prodigious. TAXES.



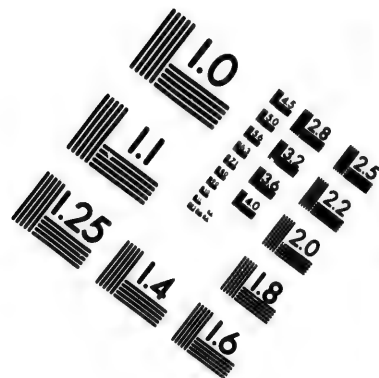
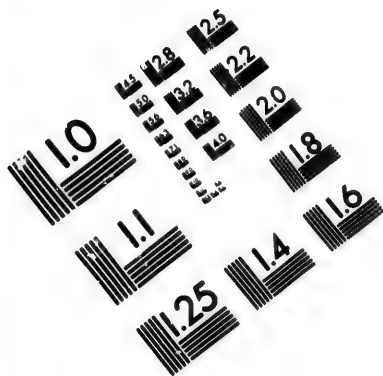
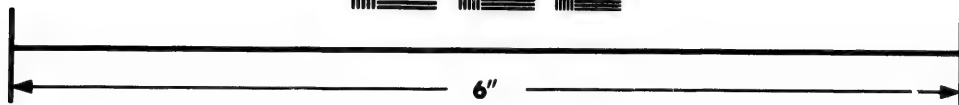
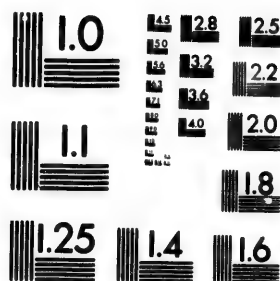


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TAXES.

digious. Formerly a remittance from Potosi of 200,000 dollars was sufficient for the occasion, but at present that sum is scarcely perceived, and the treasury is always poor. Such are the observations of Estalla, but it is probable that these inconveniencies have vanished, having been perhaps occasioned by the transference of so many provinces to a new viceroyalty, while commerce and productions did not for some time find the proper channel.

In the last edition of Dr. Robertson's History of America, * there is the following calculation of the revenue which the Spanish monarchs derive from their colonies.

Alcavalas (Excise) and Aduanas (Customs), &c.			
in <i>pefos fuertes</i>	-	-	2,500,000
Duties on gold and silver	-	-	3,000,000
Bull of Cruzado	-	-	1,000,000
Tribute of the Indians	-	-	2,000,000
By sale of quicksilver	-	-	300,000
Paper exported on the king's account, and sold			
in the royal warehouses	-	-	300,000
Stamped paper, tobacco, and other small duties			1,000,000
Duty on coinage, at the rate of one real de la			
Plata for each mark	-	-	300,000
From the trade of Acapulco, and the coasting			
trade from province to province	-	-	500,000
Affiento of Negroes	-	-	200,000
From the trade of <i>Matbé</i> , or herb of Paraguay,			
formerly monopolized by the Jesuits	-	-	500,000
From other revenues formerly belonging to that order			400,000
Total			12,000,000
Total in Sterling money			£ 2,700,000
Deduct half, as the expence of administration,			
and there remains net-free revenue,			£ 1,350,000

* Vol. iv. p. 365. In the latter editions the author rightly values the *pefo* at 4s. 6d. ; while at first he supposed it the *pefo* of exchange.

The Intendants of the provinces manage in their jurisdictions the administration of justice, of the police, of the revenues, and of war. In Paraguay, Tucuman, and Santa Cruz they joined the command of the troops. This form approaches to the ancient administration of the Captains General, except that there are more independent tribunals. The Governors Intendants have a salary of 6000 dollars, and 600 for the expence of the secretariate and visiting their province. The Intendant of Potosi, who is also director of the mint, and of the bank, has a salary of 10,000 dollars. To assist these gentlemen in the administration of justice the king appoints a learned assessor, who is generally at the same time judge in civil and criminal causes, with an appeal to the Royal Audience, as there also is from the other judges. The assessor has a salary of 1000 dollars, derived from the law suits, and 500 from the treasury, except those of the general Intendancy, who have 1000. The assessors are entitled lieutenants of the Intendant Governors; and as such, in case of the absence, sickness, or death of the governors, decide on the four causes of justice, policy, revenue, and war, direct the municipalities, and are considered as chiefs of the government. The vice-patronage and the command of the troops are alone excepted, and submitted to the appointment of the viceroy.

In the chief villages of the Indian districts, sub-delegates may be named for the four causes. In the large Spanish villages sub-delegates are also appointed for the two causes of revenue and war; but report must be made to the Intendant, while the sub-delegates over the Indians are ordinary judges in police and justice, with an appeal to the Royal Audience.

A great object of the new constitution was to banish all kinds of corruption and lucre, which formerly tainted the course of justice. The idea of re-uniting different magistracies and jurisdictions in one honourable employment, is praised by our author; nor is it burdensome to the treasury, because the salaries and emoluments of those that were suppressed are more than sufficient for the new magistracy.

Besides the nine Intendancies there are four governments in the viceroyalty of La Plata viz. that of Montevideo, political and military; and those of the Guaranis, Chiquitos, and Mojos, who have great

power

POLICE.

power military and civil. The establishments on the Patagonian coast, and the Maluinas or Falkland Islands, are subject to particular instructions.

Population.

It has already been seen that Estalla computes the population of this vast viceroyalty at 1,000,000 Spaniards or creols, and an inconsiderable number of savages. The population of the two other viceroyalties probably does not exceed two millions and a half. That of Caracas, by the account of Depons,* amounts to 728,000, including whites, negroes, and Indians; and Chili can scarcely exceed the number necessary to complete a million. Brazil, by the best accounts, contains 200,000 whites, and 600,000 negroes, while the natives are little more than would complete another million. These conjoined will yield five millions and a half; nor can more than six millions be allowed for the general population of the whole of South America.

Army.

At Buenos Ayres there are commonly two companies of fusileers, a detachment of dragoons, and another of artillery, serving for the police of the city and the garrison of the fortress, which is a square built with stone and brick, seated on the banks of the river, and the residence of the viceroys. Besides the veteran troops there is a body of 500 men, called *Blandengs*, divided into companies. They are all natives of the country, and excellent horsemen, but little disciplined, and more skilful in the spear and the rope and ball, than in fire arms. Their chief use is to defend the frontier; and there are also some blandengs in Santa Fé. The militia at Buenos Ayres is composed of two regiments, as at Montevideo, and both in the same blue uniform. The youth of Buenos Ayres are generally fond of a military life; the city being quite open is only defended by the fortress, but it is styled a place of arms, with a royal lieutenant, who, in the absence of the viceroy, exercises a political and military jurisdiction.

Such are the imperfect hints which Estalla has given on this important subject, though he have so amply detailed, as we have seen, the state of the military in New Spain. It seems scarcely possible that the grand viceroyalty of La Plata should be defended by such an inadequate force; and it is not improbable that at least ten or fifteen thousand men would be found in arms upon any serious invasion.

* Vol. i. p. 178.

According to Estall, the inhabitants of Buenos Ayres are of a sedate turn, affable, and polite. A theatre has been established, which promises to meet with success. * Bull fights were formerly held in the great square: but it is believed that this practice is abolished throughout the monarchy. Both sexes are handsome, with agreeable countenances, and wear the Spanish dress: the ladies are very fond of music, and in most good houses there is a harpsichord, with which they amuse themselves and the company, without having recourse to scandal, gaming, or cicisbeism. Their stockings, fancifully embroidered with gold, display the shape of an elegant leg; and they chiefly please by a playful and voluptuous air. The religious processions are, as usual, very numerous and splendid.

MANNERS.

These manners may be contrasted with those of the country, agreeably illustrated by our author † In the former province of Tucuman, now divided into those of Santa and Cordova, the inhabitants have an abundance of sustenance, which might be envied by the richest peasantry in Europe. Under the brown shade of luxuriant trees they hold their rude festivals, singing to the music of their guitars amorous couplets, or extempore satire against each other; while the girls prepare the drink called aloja, the young men bring abundance of beef, with *caracues* or prepared marrow, milk and honey. After old Spanish songs, such as *Cenobia* and *Saturnina*, or *Espiridion* and *Horno de Babilonia*, it was usual to sing extempore couplets; and these new Arcadians would pour out twenty at a time the girls alternately with the young men. Our author adds that the inhabitants of Tucuman might be regarded as the happiest people in the world if their manners were more evangelic; and seems in a vein of pleasantry to blame their Pagan names, which he says are derived from the new calendar of Don Cosme Bueno, a writer whose memoirs concerning America are said to have been of considerable use to Alcedo. Placed in a beautiful climate and fertile country, with an

* Estall, xxvii. 286.

† xx, 141. Among the Guaranis nets are sometimes worn instead of clothes, perhaps only to keep off the flies. Dobrizhoffer, i, 100, met a mother and daughter of fifteen in this attire; and says the girl was so fair and elegant that she might have appeared a poetical nymph or Dryad, even in a European forest.

exuberance

According

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exuberance of all the necessaries of life, free from care, and only labouring as it were for pleasure, nothing was wanting to their happiness.

Among the cities in the viceroyalties of La Plata the first and chief place is due to Buenos Ayres, though exceeded in population by Potosi. This capital is situated on the W. side of the great river Parana or La Plata, which gives its name to the viceroyalty. Not forty years have elapsed since it was regarded as only the fourth city of the viceroyalty of Peru, the first rank being assigned to Lima, the second to Cuzco, and the third to Santiago of Chili.* But ten years ago Buenos Ayres only yielded to Lima, and at present probably exceeds that capital. The creation of the new viceroyalty, the rapid progress of commerce and agriculture, and many other advantages, have greatly increased the population; and its prosperity has become progressive: formerly there were no country houses, nor other fruits than a kind of peach; but at present there is no person in easy circumstances who has not a country cottage and garden, with a variety of fruits, garden plants, and flowers. In general the houses are not very high, but are convenient, well constructed, and well furnished. Both sexes being dressed in the Spanish manner, the fashions change accordingly, as may be perceived as far as the town of Jujuy; while the Spaniards in Peru have peculiar and hereditary dresses. The women of Buenos Ayres are celebrated among the most beautiful in America; and though they are not so expensive in their dress as those of Lima, it is more agreeable and elegant.

Till 1747 there was no establishment of couriers or posts in Buenos Ayres, nor the interior provinces. Traders occasionally sent couriers, but in general entrusted their letters to passengers who travelled in carts to Jujuy or Mendoza, whence the promptitude of the intercourse may be conceived. Meat of all kinds abounds in the city, and is sometimes given to the poor gratis. The water of the river is turbid, but when preserved in large jars is excellent, even if kept for a long time. Variety of fish is found in this majestic river, and that called the *pexerey* attains a prodigious size. The want of ice is a deficiency in Spanish

* Esqalla xx. 117.

luxury, for in the province of Buenos Ayres, and even of Cordova, CITIES. snow is unknown. A new kind of industry is exerted in collecting hoar frost, in order to refresh particular drinks. The salubrity of the climate may be judged by the catalogue of the births and deaths, which evinces that the name of Buenos Ayres, or Good Air, has not been idly attributed. Yet in the months of June and July, August, and September, fogs arise from the river, to the detriment of the lungs. The *Pamperos*, or strong winds from the deserts called *Pampas*, are also injurious on account of their violence. The Indians styled *Pampas* sometimes disturb the commerce with the Peruvian provinces; but their numbers have declined, and being very cowardly, they only attack by surprise, sometimes fifty against one, as is not uncommon when Indians assault Spaniards or Mulattoes.

Buenos Ayres, by the latest observations, is in S. lat. $34^{\circ} 46'$ and in $52^{\circ} 16'$ W. long. from the royal observatory at Cadiz. Founded in 1535, it was afterwards abandoned by the settlers, who passed to Assumption in Paraguay: but in 1580 Buenos Ayres began to be restored as a mere station; and it was not till 1620 that it became the chief town of a province called Rio de la Plata. * The streets are broad and strait, and in the principal there is a pavement, as they are rather inconvenient in the rainy season, having little or no declivity, while during drought the dust is rather troublesome. As stone is rare, the houses are built of brick, the lime being procured from banks of shells; nor is there any edifice that deserves the epithet of magnificent: but the agreeable regularity of the buildings gives it the air of an English city. The houses of the rich have generally a vestibule, and a court surrounded by the apartments.

The cathedral is in the square, being a new structure on the site of the former which became ruinous in the middle of last century. The present has three naves, besides several chapels; and in 1798 had cost half a million of dollars, and would cost as much to complete it, which is probably now accomplished, as the work proceeded with expedition. Mean time the church of the jesuits served as a cathedral, but is intended to form an university. A college is opened, that of San Carlos, said to

* Estalla, xxvii. 275.

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contain about 100 students. The ecclesiastic establishment consists of a bishop and some dignitaries; the parish churches amount to six, and convents are numerous as usual in Spanish cities. There are two hospitals for orphan children, one of which receives foundlings. There is also an asylum for women of the town, and in the neighbourhood there are several hermitages and little chapels.

The haven on the E. can scarcely be so called, being greatly exposed, whence Montevideo may be regarded as the sea port of Buenos Ayres. The tide rises to a considerable height. The chief wall is to the north of the square: two rows of the trees called *ombus* have been recently planted, but the spot is muddy in winter, and dusty in summer. On the W. there is a great number of gardens in which are cultivated many of the European fruits and herbs, and olives are found to thrive.

Our author was not able to procure an exact estimate of the population of this city, which is daily on the increase, but it is supposed to be about 40,000 souls, of whom the whites or Spaniards compose one half, the other half consisting of negroes, mulattoes, and some few Indians who come from other parts. Of those called Spaniards, some are creols, born in the country of white parents; and all are chiefly employed in commerce, the arts, and agriculture, while the people of colour are mostly servants. The merchants form a chief part of the population, and the greater number are not natives. From Spain, and mostly from Cadiz, are imported most of the necessaries, as silks, woollens, cotton, linens, hats, &c. They are debarked at Montevideo, and carried in boats to Buenos Ayres, whence they may pass to any part of the viceroyalty, paying four per cent. on the sale if carried to the frontier provinces, and six per cent in other cases. The merchants are esteemed men of character and good credit. There are six capitalists worth each about 200,000 dollars; but before the freedom of commerce some were worth half a million. At present capitals from eighty to a hundred thousand dollars, or under that sum, are more general, owing to the greater diffusion of trade. Many small merchants contrive to support themselves by their industry, and in the interior provinces some credit must be given. The introduction of money into Peru is prohibited. But if Buenos Ayres were not the capital of the viceroyalty, and at present the grand mart of Peruvian commerce, its trade would

would be inconsiderable, because it has no great branch of native exportation. But the fertility of the neighbouring provinces may in time incline the balance in its favour; and the leather, wool, wheat, tallow, may yield considerable revenues to the viceroyalty. The prodigious number of mules, bred in the interior provinces of Cordova and Salta, is of great importance, as they are indispensably necessary in Peru, where many thousands are annually sold.

The chief returns to Europe are the gold and silver of the former Peruvian provinces; and ships of war are preferred for this purpose. The director of commerce at Cadiz proposes three persons to the viceroy, that he may choose one as master of this important freight. If ships of war be wanting the privilege is bestowed on merchant vessels, but even packets are more esteemed for this purpose.

The fields around Buenos Ayres are greatly inferior to those of Montevideo, as they want wood and water, and are besides exposed to the incursions of the Indians called Pampas, so that they are uncultivated, except on the banks of the river Parana or La Plata. But many farmers live on their grounds, except some who at the same time carry on trade in the city. The artisans are Spaniards, and reputed ingenious. The servants and slaves of colour are treated with such humanity as to form an example to other colonies.

The *mayorazgos*, or entailed estates, which infest other parts of Spanish America, are unknown at Buenos Ayres.* Our author is ludicrously enraged because about twenty rich families keep coaches, as if their expences did not benefit the community! In manners and accent the inhabitants greatly resemble the Andalusians. Though all be ambitious to shine, and riches, and the means of acquiring them, be more abundant than in Lima or Mexico, there is neither perceivable the excessive opulence of these two capitals, nor the misery and poverty which commonly walk by the side of exorbitant luxury. Female dress is rarely decorated with diamonds, but topazes are in general use; and our author expresses his wish that this fashion may continue, in spite of the examples of Mexico and the rich and luxurious Lima, formerly regarded as the capital city of South America, and whose population pro-

* In Mexico many houses lie in perpetual ruin on this account. Sometimes the entail is docked by an earthquake.

CITIES.

bably still exceeds that of Buenos Ayres by about 10,000; but it is gradually on the decline, while Buenos Ayres is on the increase. Before the liberty of commerce was declared, few Spaniards emigrated to Buenos Ayres; but since that happy epoch, accompanied with the erection of this viceroyalty, as the intercourse has become frequent, the migrations are also numerous; and though the occasions of acquiring sudden riches be not so great as in some of the other colonies, yet on the other hand poverty is more rare than in some countries, where while one person makes an exorbitant fortune, thousands are ruined. The wealth is also more lasting and secure than that offered by the mines. Population must also increase with the increase of agriculture; and the objects of commerce, which may be supplied to the parent country and to other colonies, may diffuse wealth among the industrious inhabitants of the new viceroyalty. "By honest industry, and not by mines, the United States have arisen to that high degree of power and opulence which we admire: and the territory of this viceroyalty being far more commodious, and agreeable to labour, and abounding in many productions which are wanting in North America, it of course offers superior advantages."* Our patriotic author proceeds to observe, that if all the Spaniards who passed to Buenos Ayres have not made great fortunes, yet they live with more ease and abundance than in the parent country; and as a greater part are Andalusians, who are little celebrated for industry, it is not strange that the progress has been slow. But why does not the wisdom of the Council of the Indies hold out peculiar encouragements to Catalonians, Biscayans, and Gallicians, from the three industrious provinces of Spain?

The market of Buenos Ayres is abundantly supplied with all kinds of plants, fruits, meat, bread, fish, fowl, milk, &c. Our author says, that near one thousand head of cattle are slain in the neighbourhood for the daily use of the city, and are brought in carts to the market where they are examined by a sworn proveditor. Fish is also abundant; but in general all the eatables which come from the side of Montevideo are esteemed the best. Fountains alone are wanting, and the water is brought by the negroes from the river, yet as it is muddy for a time,

* Esfala, xxvii. 285.

some send as far as the Rio Negro. The steam engine seems utterly a stranger at Buenos Ayres. The climate is less healthy than that of Montevideo, and the calentures or fevers are pernicious. Our author has sagely observed, that more females are born than males, by a special dispensation of Providence, for the accommodation of strangers. This city is not deficient in coffee houses, shops of confectioners, and taverns; but ice and snow are wanting, which may in time be procured, though from a great distance.

The viceroy, as already mentioned, is lodged in the fortress, which is of little strength, and the interior or place of arms is filled with houses. The house of the viceroy is old and confined, and little corresponds to the idea of a palace, the name generally given to such a residence. In the under story is the secretariate, and the new Royal Audience; opposite on the S. is the royal treasury; on the W. the chapel and guard house; on the N. and E. various magazines. The municipality consists of two alcalds, twelve regidores, and inferior magistrates. The guild-hall is a large and regular building, raised on pillars of brick; the judges here hold the sessions; while the jail is beneath.*

The environs of Buenos Ayres, on the road towards Cordova, are represented as pleasant, being full of gardens and groves, diversified with fields of wheat and maize. There is abundance of cattle, commonly enclosed in the night in pens formed of high stakes, a bull's hide being nailed between each, as not unusual in this country, where wood is very scarce, and stone is unknown. All this province is esteemed very healthy; many men are still robust above the age of eighty; and our author speaks of one aged 110, who had never known sickness. Deaths are common from accidents from the heels of horses or the horns of bulls, good surgeons and medicaments being wanting. At the village of Areco the breed of mules already begins, for which the interior provinces are so celebrated.

This account of the capital of the new viceroyalty, now the grand mart of the opulent commerce, so interesting to all Europe, conducted between Spain and South America, has been enlarged in consideration of its importance. The other chief cities and towns will not demand equal attention. By the recent account of Helms, Potosi would demand the

Other Cities.

* *Essais*, xx. 122.

preference,

some

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preference, having as he asserts a population of 100,000, while Lima itself has only been estimated at 54,000; but Robertson had, from the best Spanish authorities, assigned only 25,000 to Potosi, and the same number is given by Alcedo, who is however too often antiquated in his descriptions. However this be, it may not be improper first to throw a glance on the towns in the neighbourhood of Buenos Ayres, from the recent materials of Estalla.

Montevideo.

Montevideo is celebrated for its harbour, the most considerable and advantageous of this viceroyalty. Struck with the situation Don Bruno de Zaballa, with fourteen or fifteen families from the isle of Palma, one of the Canaries, established himself here in 1731; since which time the population has been gradually on the increase. Such is the abundance of the country that it is noxious to the industry of the poor, and there is a class of vagabonds, called *gaudérios*, whose manner of life greatly resembles that of our gipsies, excepting that they do not steal, having no motive whatever. These *gaudérios* are natives of Montevideo, and the villages in the neighbourhood, go meanly clothed, while the coverings of their horses serve them for a bed, and the saddle for a pillow. In this happy climate the guitar and amorous ditties form their sole occupation, they thus delight the rustics, who in recompence lodge them, and give them abundance of food. If a horse be lost another is given, or caught among the wild ones, which abound in the neighbourhood. The wild cows or heifers supply abundance of food, and are sometimes killed for the tongue, the marrow-bones, or other delicate parts. The marrow is eaten liquid, the bone itself serving as a pot. Sometimes, in their rude cookery, a beeve is gutted, and all the tallow lodged within, which being set on fire, roasts the remainder. Santa Fé stands on the great river Parana. Corrientes was founded in 1589, and was at first greatly infested by the Abipons, so that it became necessary to establish a corps of militia in order to repress them. It has now a church and three convents.

Santa Fé.

Corrientes.

Potosi.

But next in importance to the capital is the celebrated city of Potosi, supposed, as already mentioned, to contain 100,000 inhabitants. It stands in a district enclosed by the province of Porco, being very mountainous and cold, and consequently barren; yet there are sheep and some

vicunas.

vicunas.* The district of Potosi is bathed by the river Pilcomayo, Town. which joins the Parana not far above Corrientes, so that there is a natural connection between this province and Buenos Ayres. The city of Potosi was founded in 1545, on the side of a mountain of the same name, in a glen formed by a rivulet. The mint was established in 1562, and has continued richly to supply all Europe with silver; but an account of the commerce and mines is reserved for another part of this description. The numerous convents naturally followed the wealth of the city, a vow of poverty being found very compatible with great riches. There were fourteen curates in the city and the district; but seven curacies were abolished in 1759. In the neighbourhood there are warm medicinal baths, styled those of Don Diego, and greatly esteemed. In general it is believed warm springs are found in the proximity of minerals. The famous mountain of Potosi may be said to consist of one mass of silver, which the avarice and labours of 260 years have scarcely weakened. The coinage of Potosi is about 4,000,000 dollars a year. As provisions and other articles are brought from all quarters, the barrenness of the soil is little perceivable, and the luxuries of life naturally flock around a mountain of silver. A cold and violent wind, called *tomabavi*, reigns during the months of May, June, July, and August. The city stands on an eminence, on the south side of the mountain, and may be about two leagues in circumference.† Potosi is by the Spanish writers styled an Imperial City, the residence of a corregidor, and of a tribunal of finance, composed of a comptroller and treasurer.‡ Its commerce was formerly compared with that of Lima, but is now far superior, and used to consist in the exchange of ingots of silver for the articles imported. Barba, who wrote a celebrated treatise on metallurgy, had been a curate at Potosi.

La Paz, in the same region, is also a considerable city, having, according to Helms more than 4000 hearths or twenty thousand inhabitants; and is an elegant and clean town, chiefly trading in the noted tea of Paraguay. La Paz.

Mendoza, formerly in Chili, but joined to the new viceroyalty, was founded in 1559 in a pleasant situation, on the eastern side of the Mendoza.

* Alcedo in voce.

† Ulloa Memoires, vol. ii. p. 268.

‡ Id. Voyage, i. 521.

Andes.

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Andes. The houses are handsome, and have generally well watered gardens, abounding in fruit and pot herbs; there are many churches and convents, and Alcedo computes the families at 300, of which one half are Spaniards and creols. There is here a celebrated passage through the Andes for travellers to Peru. Mendoza stands on a river of the same name to the S. of the volcano of Santiago. It used to be infested by the incursions of the savage tribes of Chili; and the city and province being on the eastern side of the Andes, while all the other settlements in Chili are on the west, they became naturally adjoined to the new viceroyalty.

Chucuito.

Chucuito is an interesting little town on the grand lake of the same name, otherwise called Titicaca; it is one of the most cheerful and convenient towns in that region; and though the climate be very cold the soil is fertile, and there is abundance of cattle.

Puno.

Puno, on the western side of the great lake of Titicaca, is a rich and populous town, with some illustrious families. There is a beautiful church for the Spaniards, and another for the Indians. The other towns, or rather villages, in the annexed Peruvian provinces are of little consequence. Oruro, noted for its mines, has according to Alcedo five convents and four parish churches; but the mines having declined it is probable that a decrease has taken place. Oropesa was formerly of considerable consequence, being the capital of the province of Cochabamba, formerly styled the granary of Peru.

Santa Cruz.

Santa Cruz de la Sierra is the seat of a bishopric while it is rather to be regarded as a missionary station than as a regular town.

Jujuy.

On returning towards the S. the town of Jujuy has rather declined, partly owing to the litigious spirit of the inhabitants, a weakness attached to the ancient province of Tucuman: the chief trade is in cattle which they sell to the miners of Potosi, besides some mules which they bring to the great fair of Salta.*

Salta.

Salta is celebrated for the great fair in February and March, during which it is supposed that in the adjacent valley of Lerma there are assembled more than 60,000 mules, and 4000 horses. The rainy season

* Estalla, xx. 138.

has been strangely chosen for this exhibition, to the great inconvenience ^{TOWNS.} of the company, who can hardly find a space to pitch a tent. If this inconvenience be not compensated by other advantages, the season ought to be changed. The mules are confined in pens that they may not be fatigued before their long journey to the centre of Peru, where no mules are bred, and where they are employed for travelling, and in carrying loads from the metallic mountains. Many of them perish on the road; and the feeders believe that this mortality proceeds from a contagious disorder, arising from the marshy pastures. The frequenters of the fair of Salta consist chiefly of people of Cordova, in the S. of Tucuman, Europeans and various Americans, who have sales at Buenos Ayres, Santa Fé, Corrientes, and part of the province of Cuyo. It may be said that the mules are born in the fields of Buenos Ayres, fed and nourished in those of Tucuman, and work and die in the mountains of Peru. It is supposed that in the course of ten years 500,000 mules have passed into Peru, of which not 50,000 exist, so that the mortality must be prodigious. The best are produced by an ass and a mare; and to accustom them to their new lovers the skins of their colts are fastened around young asses, so that the credulous mothers permit them to suck as their own offering. Salta, as already mentioned, is very dirty in the rainy season, and the town cannot be passed on horseback, as the animals stumble in the strong mud. There is only one parish church, with two curates and two assistants; there are commonly baptised about 278 annually, while the dead may amount to 186. Few old persons are seen, and the climate seems unhealthy. In the summer a governor, with the title of Captain General, resides here to protect the province against the savages of Chaco. *

San Miguel of Tucuman, formerly the capital of the province of that name, is now in that of Salta. The situation is elevated and agreeable, being surrounded with fertile fields, but the population does not seem to correspond with the extent. Some mules are bred, but the chief traffic is in a kind of carts or cars, which pass to Buenos Ayres and Jujuy, the abundance of wood facilitating this manufacture. † Our

* Estalla, xx. 133.

† Near St. Miguel of Tucuman there is abundance of prodigious cedars, and the timber is brought even to Buenos Ayres. Dob. i. 52.

Towns.

author gives a particular description of these carts, which are covered with hides to defend them from the rain and sun, being merely what we call covered waggons. They are drawn by oxen, who are very strong, as four would go a long journey with the usual load of 150 arrobas, the arroba being 25 pounds. These animals will boldly pass dangerous rivers with the waggons, always presenting their breasts to the rapidity of the current. At first they give signs of fear, but do not retreat though the water cover their bodies; and if they cannot proceed, they firmly maintain their station till other oxen be added. These waggons are the diligences and stage coaches of this singular country; and by them commerce is conducted commonly in numerous caravans, like the camels of Egypt and Arabia. The regular journey of a *troop of Tucuman*, the common appellation for these caravans, is seven leagues a day, though in some directions only five can be accomplished, on account of the numerous rivers.

Cordova.

Cordova, a celebrated town, the capital of a province and residence of a bishop, is situated between the river Primero, so called because it is the first of five in the neighbourhood which flow in the same direction, and a hill, on a level but sandy soil, so that the rains speedily pass, though the vapours be unwholesome. The city approaches a square form, but the cathedral is irregular from the want of symmetry in the towers.* There are many good and strong houses in the city, but seldom high, though the roofs be elevated; and there are three convents and two colleges, one of which the Franciscans have idly styled the university. Few places of equal extent can display equal wealth, the inhabitants, Spaniards as well as Creols, being noted for activity and industry. The chief trade is in mules, which they bring from the southern provinces, and having fed them in their fields, conduct them to the fair of Salta, where they are sold to merchants from Peru at eight or ten dollars each; but some send them on their own account to be sold in the Peruvian markets, the value being proportioned to the distance. The inhabitants may be 600; and the slaves, mostly of different mixtures, do not procure their freedom so easily as in other

* Estalla, xx. 123.

parts of America. As meat is very cheap, and the slaves weave and Towns. make their own clothes, they are at once easily maintained, and very useful; nor do they wish for freedom, being neither fatigued nor oppressed. The female slaves are excellent washerwomen, and go into the river with the water above their middle, nor are they deficient in other kinds of industry. The ladies of Cordova are modestly clothed, and careful observers of the customs of their ancestors, whence the slaves are not permitted to wear any cloth but that manufactured in the country. The wine, and a considerable part of the grain, are procured from Mendoza, while brandy is brought in leathern bags or bottles from S. Juan de la Frontera, thirty leagues to the N. W. of Mendoza, on the northern extremity of the province of Cuyo.

The town called Assumption in Paraguay, the chief of the province, Assumption. was founded in 1536, and the bishopric in 1547. For a considerable time it had the preponderance over Buenos Ayres, as mentioned in the account of that city. Besides the cathedral there are three parish churches, and four convents; but Alcedo only computes the inhabitants at 400. In the vicinity is bred abundance of cattle, sheep, horses, mules; and among the articles of cultivation are wheat, maiz, sugar, tobacco, cotton, yuca, manioc, *batatas* and garden plants. Dobrizhoffer says that the houses are built of stone or brick, but only of one floor, as are the monasteries. The streets are crooked, and impeded with stones and wood, while the grass grows in the chief square.*

The interior commerce of this viceroyalty, as already mentioned, is Commerce. conducted by the means of covered carts or little waggons drawn by oxen, and which form caravans in order to be secure against the attacks of the savages. The chief journies are from Buenos Ayres to Jujuy, and to Mendoza; after which stations it is necessary to have recourse to mules, as the country becomes mountainous. The load of each waggon exceeds 100 arrobas, and is commonly 150, the hire being

* Vol. i. 59. The best account of this viceroyalty is that of Dobrizhoffer, but he has improperly extended the name of Paraguay to the whole. He left America in 1767, after a residence of twenty-two years.

The town quaintly called Assumption, the capital of Paraguay, has a commodious port on the river, but is built too near that turbulent stream. Dob. i. 59.

COMMERCE. from 70 to 150 dollars, but commonly a dollar for each arroba, on the distance from Buenos Ayres to Jujuy. This trade supports many individuals, and increases the circulation of money; and the population in the provinces of Cordova and Salta is supposed to amount to 200,000 souls, some even suppose 300,000.

The freedom of trade, granted in 1778, contributed greatly to increase the general commerce of La Plata; and by a royal ordinance of the 10th April, 1793, it was permitted, that salted meat and tallow might pass to Spain, or the other colonies free from duties, a privilege which had before been granted to the trade in negroes, who were found necessary for the cultivation of the country.* Though there are several good ports, as Montevideo, Maldonado, Colonia, and Barragan, others might be added on the grand rivers Parana and Uruguay.

Our author proceeds to give a statement of the ships which arrived at Buenos Ayres in 1796, namely thirty five from Cadiz; twenty-two from Barcelona, Malaga, and Alfasques: nine from Corunna, five from Santander, one from Vigo, and another from Gijon; the value of Spanish products having been 1,705,866 *American* dollars, and that of foreign produce 1,148,078, the total being 2,853,945.

The exports were on twenty-six vessels to Cadiz; ten to Barcelona, Cadiz, Malaga, and Alicante; eleven to Corunna; four to Santander; carrying in gold coined and uncoined 1,425,701 *American* dollars; in coined silver, ingots, &c. 2,556,304; in various native products 1,076,177: the total being 5,058,882.

The native products in the preceding embarkations were 874,593 hides of beeves; 43,752 hides of horses; 24,436 fine skins; 46,800 arrobas of coarse soap; 771 arrobas of vicuna wool; 291 arrobas wool of the guanaco; 451,000 horns of bulls; 3223 quintals of copper; 2549 dressed hides; 222 dozens of prepared sheep skins; 2128 quintals of beef; 185 quintals of pork; 340 arrobas of hair; 40 quintals of tin.

Two ships also arrived from Havana, with sugar, brandy, honey, cacao, &c and fourteen proceeded to Havana with dollars, salted meat,

* Estalls, xx. 106.

soap, &c. Two ships also arrived from Lima and Guayaquil with COMMERCE.
sugar, salt, cacao, rice, *cinnamon* (a lately discovered produce on the east of the Andes) and indigo. One ship proceeded to Lima with hoes for agriculture, slaves, soap, thread, &c.

In four vessels belonging to Buenos Ayres, and five foreign, there have been introduced 1350 negroes. In the slave trade have also embarked nine native ships, and two foreign, having exported 159,820 dollars in silver, and 24,703 in produce. Our author has subjoined a table of the commerce for the years 1795 and 1796, from which it appears that a considerable increase had taken place in the general trade, which is with Spain, Havana, Lima, and the Negro Coast; and if a similar table for 1805 could have been procured, the contrast would have been more striking, and would have been laid before the reader.

The increase of commerce has had, as usual a beneficial effect upon Agriculture.
the agriculture. A royal schedule, in 1791, granted to Spaniards and foreigners the right of introducing negroes, and other instruments of agriculture. Nor is it improbable, in the opinion of our author, that this wide and fertile viceroyalty may become in a few years not only the granary of the other Spanish colonies, but of the parent country, by the extreme fertility of the soil, and the excellent regulations adopted. The climate is one of the most benignant on the globe, and the extent of fertile lands immense, watered by infinite rivers and rivulets, which join the majestic waves of the Paraguay and the Parana. The farms, stations, and inclosures for breeding bees, horses, mules, sheep, &c. are so numerous that they may already be counted by millions.* There is abundance of salt rivers and lakes, with numberless creeks to load boats with salted meat; and the industry of the natives is seconded by the introduction of negroes. Some districts of the missions produce cotton, lint, and flax.† Although agriculture, fishery, the chase, and the mines, are objects to enrich these provinces, yet none is more useful than the breeding of cattle, and the numbers may be judged of from the skins

* Some Spaniards had herds of one hundred thousand bees. Dob. i. 247. He ridicules the idea of Dr. Robertson, that the American savages eat less than Europeans.

† Our author adds, that there are mines of gold at Maldonado, and San Luis, two hundred leagues from the capital. xx. 108.

exported.

COMMERCE. exported. In 1792, 825,609 hides of beeves were carried to Spain; not to reckon those sent to the coast of Brazil, and for the purchase of negroes, besides the internal consumption and waste, which are prodigious.

Natural
Geography.

The natural history of this grand viceroyalty may be traced in the recent publications of Dobrizhoffer and Helms, not to mention the writings of the jesuits concerning Paraguay, and the works of Ulloa, which chiefly relate to the Peruvian provinces. A few circumstances less known to the English reader shall be first extracted from the recent publication of Estalla, in the order generally followed in this work. The

Rivers.

grand rivers of Parana, or La Plata, which gives its name to the viceroyalty, and these of Paraguay and Uruguay, have been already briefly described in the general account of South America.* To the S. W. of the station of Lujan, at the distance of 113 leagues, and nearly at the same distance from Buenos Ayres, there is a lake of six leagues in circumference, which is extremely salt; and at the bottom the salt is found in cakes so hard and thick that it is difficult to break them with iron tools. On the western and southern sides there are carob trees, and a kind of broom, extending for more than a league, the soil being of sand and chalk, but marshy.† A singularity of this lake is that all the streams which enter it from the south, which is upland, are salt, and those from the north, which is still higher, are sweet. Many other salt lakes appear to exist between this and the Andes of Chili, and others also on the east towards the river Flores. It is remarkable, that in this chain of lakes, a few are fresh among the greater number which are salt; and that in the rainy season they are so swelled that many of them communicate

Lakes.

* The name *Parana* signifies *confin of the sea*, Dob. i. 188. What is to be thought of his *yaquara*, which he calls a water tiger, and says that it devours mules and horses? ib. 191. See the description p. 330. It is dangerous in passing rivers; but there is a fish in the Parana by which swimmers are sometimes surprised to find themselves completely castrated.

The terrible cataract of the Iquasú, four leagues before it join the Parana, is described by Dobrizhoffer, i. 195. This navigable river falls about thirty yards, and the vapour is seen at the distance of four leagues. At the distance of three leagues from the cataract, the Iquasú is a league in breadth.

The mouth of the Parana is said to be sixty leagues in breadth, and Spanish ships from Cadiz, have mounted far above Assumption, which is four hundred leagues from the sea.

The word *Paraguay* means the *crown*, or a kingly stream. The fabulous lake of Xarac has been exploded by Dobrizhoffer.

† Estalla xxvii. 325.

with each other. Our author conjectures that the river Mendoza,* LAKES. whose termination is unknown, may probably bring the salt from the Andes, and be lost in the lakes.

The grand lake of Titicaca, is often four to six fathoms deep not far Titicaca. from the shore; and towards the middle forty or fifty, without any shoals. The Indians pass in their balsas, a kind of rafts, supported by inflated skins, from isle to isle. On one of the picturesque islands, the Incas dedicated the first temple to the sun. This noble lake is however subject to sudden winds from the mountains. The fish are those styled by the Spaniards *bagres*, *omantes*, *fuchas*, *anchovetas*, and *boquillas*, mostly it would appear of the alpine kind. It is a constant tradition among the Indians that great treasures were thrown into this lake when the Spaniards entered the country; and among others the great chain of gold made by command of the Inca Huayna Capac, which was 233 yards in length, and surrounded six thousand men who danced within.

The grand chain of the Andes, the western boundary of the vice- Mountains. royalty of La Plata has already been described in the general account of South America. Some others of smaller note may be here mentioned. The chain which is considered as terminating the wide plains or stepps called Pampas on the south, is by the natives denominated Gazuati, and Gazuati. by the Spaniards La Ventana, though the eastern part is also styled the Volcan, probably from its form, for no volcano is indicated. This chain described by Estalla, is also laid down by La Cruz, but in his usual confused manner, on the south of the province Tuyu. It is supposed not to exceed a thousand feet in height, and is visible from the route to the salt lake. Beyond the country becomes more irregular than the Pampas; and after passing the rivers Sauce and Saucecillo, which runs into the Colorado, at the distance of forty leagues, is the Spanish missionary station called Carmen on the Rio Negro, one of those which belong to what is called the Patagonian shore, which extends to the straits of Magellan.

* This river, according to Alcedo, has pierced a hill, and formed a natural bridge, over which three waggons may pass abreast; the inside of the arch being adorned with various figures by a natural infiltration, superior in beauty to any thing that art could produce.

The

MOUNTAINS
Of Cordova.

The mountains of Cordova, being a chain passing N. and S. on the W. of that province, are by some regarded as a branch of the Andes, and said to be covered with perpetual snow. But while the orology even of the Andes themselves, the most sublime and magnificent chain of mountains in the world, remains obscure, it is no wonder that the branches are neglected. By Mr. Humboldt's account a chain of mountains unite the Andes with the mountains of Paraguay and Brazil, through the provinces of the Mojos and Chiquitos; so that this chain must wind in a semicircular form.* The mountains of Cordova, according to Helms, sometimes present red and green granite, and gneiss, while the grand chain of the Andes consists of argillaceous schistus. It is not wholly improbable, that if the grand chain, which consists of three divisions or separate ranges of mountains, were examined by a Saussure, or other eminent investigator, a grand line of granite might be observed, though the argillaceous schistus forms the highest mountains, as in the Pyrenees the calcareous ridge greatly exceeds the granite in height; while in the other European mountains, and so far as appears in those of Asia, the grand elevations are of granite and granitic compounds.

Botany.

The botany of those provinces of this viceroyalty which formerly belonged to Peru, may be traced in the *Flora Peruana*; but of the central, southern, and eastern provinces, no formal botany has yet been published. This deficiency may be in a great degree supplied from the work of the industrious Dobrizhoffer, who has in his first volume given a general natural history of Paraguay. In extracting a few notices, the order of the original work shall be followed.

The tree which bears the quinquina or jesuits bark is frequent among the Chiquitos, who call it *pizoes*. It is of middling growth, bearing a round fruit with two kernels. The juice is of a pleasant smell, but very bitter, and the Indians use it for some complaints arising from cold. The sarsaparilla is the root of a thorny plant, very common on the banks of the river Uruguay and other streams, but the best is from

* A chain of mountains girds Tucuman, Charcas, Santa Cruz de la Sierra, and Chaco extending from Cordova towards Potosi; thence to Santa Cruz, and the lake or rather river Mamori, in one continuous ridge. Dob. i, 133.

Honduras. On the mountains near the town of Assumption, and on the banks of some of the rivers, rhubarb is found, the leaf of the species ending in a point like those of the lily. The true jalap, or wonder of Peru, abounds in Paraguay. The mechoacan, or white rhubarb, a remedy given to children, is also found, the plant resembling the bryony. The beautiful tree called *sassafras* is said to abound in the northern parts of Paraguay; the wood is often adulterated with that of the red pine. The *palo santo* and the *guayacan*, which must not be confounded, are natives of these provinces. The latter is the taller tree, and the wood used with success in the gout, and other complaints, under the name of *guayacum*. The *samu* is a singular tree, called the drunkard, on account of its odd form, as the trunk, bulging in the middle, and narrowing towards the root and top, assumes the semblance of a barrel. The *mangay* yields the elastic juice so well known in Europe, and used for various purposes: it is about the size of a cherry tree, with odorous white flowers, and golden fruit the size of a large plum. The *caa*, which yields the resin called dragon's blood, forms woods on the shores of the Parana and Paraguay. The *cupay* yields a precious oil used in medicine. The *nux vomica* is common in Paraguay, and used by the Abipons in cases of indigestion. Vanilla is found among the Chiquitos, though not equal to that of New Spain. The tree which yields chocolate prefers the Peruvian forests: the fruit somewhat resembles a cucumber, and contains the pips or nuts, about the size of an almond, with a thin skin sweeter than honey, generally eaten by the Peruvians before the Mexicans had discovered the use of the pips themselves in a nourishing and familiar decoction. The *timbabi* supplies store of a beautiful golden gum, which running into moulds is formed into crosses, necklaces, and ear-rings, an elegant and new object of industry to the European artisan. In the forests of Tucuman and Paraguay strait and lofty cedars abound, and might be of great use in naval architecture, as the wood is very durable. The American pine is here called *cury*, the wood is harder than the European, and marked with red veins. The Guaranis make elegant images of the knots, which exude a red juice, so as to appear varnished.

BOTANY.

The algarroba or carrob tree is of great utility, but the fruit differs in form, size, and colour from what is commonly sold in Europe, the tree having been brought from Africa into Spain by the Moors.* The American carrob deserves European cultivation, as not only a winter supply for cattle and mules, but as affording palatable food and drink to mankind. The shell or husk is broader than that of Spain, with larger beans or seeds of a brownish colour, while the pulp is whitish and sweet. In Paraguay the shells are sometimes a span in length, and as broad as the thumb. Of this valuable tree there are several species; and it is the business of the savage women to gather it in the woods, make bread by pounding it in a mortar, or a wholesome drink by infusing it in cold water, contained in a beeve's skin, when, in about twelve hours, the fermentation commences, and the liquor at first acid soon becomes sweet and wholesome. It is used even to intoxication, the *laaga*, or juice of the carrob, being a favourite potation; and, if moderate, productive of great health and incredible vivacity. It is also found a radical cure for consumptions, and is of strong diuretic virtue. This tree chiefly abounds in Chaco, and near Santiago, where its benefits are extended to horses, mules, and cattle, which it fattens in a sudden and surprising manner. This valuable tree is of very speedy growth; the town of Concepcion, on the river Vermejo, having been ruined by the savages, the seeds of the carrob, drank by the inhabitants, have grown into so thick a wood, that even the ruins are invisible. The wood of the white carrob is of a violet colour and great utility, being used for the keels of the vessels that navigate the Parana. The fruit ripens in November and continues till March, being the summer of that hemisphere; and the Abipons begin their year with the flowering of the carrob, whence the word *yniera* signifies both the flower of the carrob, and a year. A question of age is "how many times have you seen the carrob flower?" The fruit of the black carrob is smaller, and must not be eaten raw, for by swelling and roughening the tongue it takes away the power of speech, whence the Abipons give it to their wives. There is a third sort that resembles

* Dobrizhoffer, i. 402. who frequently in his work uses the term *filigua graca* for the valuable fruit of this tree, by the Germans called the bread of St. John.

the acacia, but the fruit is bitter, and only used in dyeing black colours, BUTANY. but it yields a gum perfectly similar to that called Arabic.

What is called the tea of Paraguay is composed of the leaves of a common tree, called by the Guaranis *caa*, dried by a slow fire: this tree loves a moist soil, and somewhat resembles the orange. The smell is very sweet. The leaf being gummy must not be too much dried, and as the taste is somewhat bitter, the decoction must be sweetened.*

The numerous and beautiful species of palm need not be enumerated. The common European fruits are little known in Paraguay, but there is abundance of figs, peaches, pomegranates, lemons, and large oranges. Among the native fruits is the jujub, the *chanar*, the *yacani*, the *quabyra* whose fruit resembles a cherry, but has a disgusting smell. In one species of this tree a kind of ants, perhaps resembling those of New Spain, form a wax as white as snow, and smelling like frankincense. Of this candles are made for divine service; and our author is surprised that it is unknown in Europe. The plant which bears the passion flower also yields a wholesome and exquisite fruit, resembling a small apple but of a golden colour with red spots. The fruit called *quembe* is only known in the northern parts of Paraguay: it is of a cylindrical form as thick as the fist, and sometimes weighs two pounds. It yields a delicious pulp, and grows on a strong creeping plant. The *tatay* produces a fruit like the mulberry, but yellow. The *mammon* resembles a woman's breast, whence the name: it grows on the trunk of the tree and approaches to the melon. The *alaba* is the *pitabaya* of California, and is a delicious and refreshing fruit, which might be cultivated like the pine apple. The pips of the *anguay*, being of a splendid violet colour and triangular shape, are used by the Indian women to make necklaces. The fruit of the *tarumay* resembles the olive, but is far inferior. But to enumerate all the fruits would be infinite. The *molle* yields a copious and fragrant gum. The *bacoba* and *banana* are well known; as is the *anana* or pine-apple, called by the Guaranis *nana*, which signifies a thistle, in allusion to its form, but the native taste and smell our author compares with those of the strawberry. The manioc is cultivated for the root, which may be eaten in six months after planting the tree. The cotton tree is another

* Dob. i. 112.

BOTANY.

common plant. The *sevil* yields a bark useful in tanning. The *seibo*, a tree of moderate size, bears flowers of a violet colour, while the blue or the violet are scarcely known among the blossoms of shrubs. From the leaves of the *isapi* distils a copious supply of water, so as to convert the surrounding soil into mud. The ant tree is so called because, being of a spongy nature, it is a chosen haunt of these insects, who, when disquieted rush upon the unwary traveller. The *umbu* is of a prodigious size, and might cover fifty men with its thick shade. The willow is only known on the isles and shores of the Parana. The *ambay* is used in striking fire. The *uruchy*, a shrub, yields a strong scarlet dye. Indigo abounds in the fields of Paraguay, but is neglected by the indolence of the savages. The Spanish name *anil* our author derives from the Arabic *nil*, which signifies blue; whence various Niles or blue rivers among the ancient oriental nations. Cochineal, by our author's account, is common in Paraguay, but is probably the wild kind, which is a distinct and inferior species, but the cultivated has been found to thrive among the Guaranis. The plant called *nakalic* by the Abipons attains the height of five feet, and yields a beautiful yellow used by dyers and painters. The *caraquata* of the Guaranis is the *magney* of the Mexicans, and resembles an aloe. Many kinds are common in Paraguay, where its numerous uses are nearly as general as in New Spain. Reeds of a prodigious size abound, and are sometimes preferred to timber. The sugar cane is planted out at the end of August, which here is the beginning of Spring; but our author regrets that the cultivation does not approach that of Brazil, where it yields a prodigious revenue to the Portuguese.* Species of rosemary, rue, mint, sage, borragé, &c. also abound among the Guaranis; but the common nettle our author did not find. Of maiz or Indian corn is made the favourite drink of the Indians, called *chicha*, or *allosja*, being chewed by the old women and

* On this occasion our author mentions honey, sometimes so pure as even in a glass to resemble water. If found in the wood of a fragrant tree, it will acquire an exquisite smell. The Abipons abstain from honey during their winter months of June, July, and August. Beautiful salt is brought to Buenos Ayres from the great lake in the southern desert: but there is always danger from the savages of the Pampas. The Abipons rub their teeth with salt and tobacco, and never lose any even in old age. Our author supposes the name tobacco to have sprung from the isle of Tobago.

then

then left to ferment. Potatoes of great size abound in Paraguay; they BOTANY. are found white, red, and yellow, but the last are esteemed the best. The *mani* also grows under ground, the root of a beautiful plant about two feet in height: it somewhat resembles the almond in taste and form. There are several kinds, and it is to be regretted that it has not been transported to Europe, the oil being also superior to that of the olive. European beans, peas, melons, cucumbers, among which is the *zapallo* from Spain, originally from Angola in Africa; lettuce, turnip, mustard, cresses, leeks, and onions, are in general use in the colonies. The asparagus is found wild in the fields, but the cultivation has been neglected. Around Buenos Ayres, Montevideo, and Santiago in Tucuman, large quantities of wheat are cultivated. Water-mills are however unknown; and though sometimes those moved by wind appear, yet in general the wheel is drawn round by the labour of horses or mules. Oats are totally unknown in these colonies, the horses being always fed with barley. The culture of the vine is confined to Cordova, Rioja, and the valley of Catamarca: but not being sufficient even for the priests at the altar, it is brought from San Juan, Mendoza, and San Luigi, formerly districts of Chili. Paraguay produces a generous and healthy wine, but the roots are destroyed by the prodigious number of ants. Perhaps the introduction of some bird, animal, or insect, which feeds on these creatures, might be found an important service.

It has already been seen that the wool of the vicuna and guanaco are Zoology. among the exports from this viceroyalty.* The former is worked in Spain into most elegant and durable cloth, nor is it unknown in the manufactures of France. Naturalists now allow, that there are no less than five species of these animals, which may be called small camels, the *glama* or *lama*, the *guanaco*, the *moromoro* or *chilibueque* of the Chilese, the *vicuna* and the *paco* or *alpaco*. Gmelin in his edition of

* An ample account of the quadrupeds of Paraguay has been given by Azara, a Spanish officer employed to settle the limits with Portugal, but which was prevented, as the French editor asserts, by the influence of England, who finds the uncertainty of their frontiers convenient for her contraband trade. His work was translated into French from the MS. and published at Paris 1801, 2 vols. 8vo. In the preface, p. li. may be found a comparison between the animals of America and those of the old continent: from which it will appear that some are larger and some smaller; and Azara himself has repeatedly confuted the fantastic theories of Buffon.

Linnæus,

ZOOLOGY. Linnæus, has called them *camelus glama*, *buanacus*, *arcuanus*, *vicugna*, *paco*. The pacos are also styled in Spanish America *carneros de la tierra*, or native sheep. Alcedo, in his dictionary of the natural history of America, has contented himself with an account of the paco or alpaco, which he says will also apply with some variations to the guanaco and the glama. If his account be accurate, the paco is the largest, and may carry four or five arrobas, bending its knees like a camel to be loaden and unloaden, while its peculiar habitation is among the snow and ice of the Andes, where the quantity of fat between the skin and the flesh, and redundancy of blood, both circumstances resembling the polar animals, enable it to bear excessive cold. This seems to be the animal exhibited in this country, and of which two are in the menagerie at Malmaison, near Paris. Judging from these, the head is remarkably small, so as to recal the idea of an ostrich, and the colour a dark and dirty-brown. The glama seems to approach so near to the paco, that it may be difficult to pronounce it a different species. The chilihueque was used by the Chilese as a beast of burden, and is probably little removed from the paco. Of these three it would appear that the wool is coarse, and can scarcely enter into manufactures. M. Buffon, who was often very rash and theoretic, and often very ill informed, has supposed that the vicuna is the paco in a state of nature, an idea sufficiently confuted by Molina, in his excellent natural history of Chili. The vicuna is an elegant little wild animal, of the size and form of a tame goat, except that the neck is longer, sometimes twenty inches, that the head is round and without horns, the ears small and strait, the muzzle short and beardless, and the feet higher. The wool is extremely fine, of a fawn colour, approaching to that of a dried rose, but Molina adds, that even the wool of the paco is manufactured by the Peruvians. The chilihueque, or sheep of Chili, is so called by the Araucans, and excepting the length of the neck, and of the legs, all the other parts resemble the sheep. According to Molina, the guanaco is distinguished by its having hair, not wool; and by its having a hunch on the back, while the glama is flat.* After indicating other differences, this ingenious author adds, that the

* Dobrizhoffer i. 168, says expressly, that the guanaco resembles a deer, but has the hunch of a camel.

guanaco sometimes approaches the height of a horse, or about four feet ZOOLOGY. three inches before, while his length may be seven feet from the muzzle to the tail. He is covered with long hair, reddish on the back, and white under the belly. But as we have already seen the wool of the guanaco is among the exports of Buenos Ayres, where it would be difficult to conceive a confusion of terms, it would appear that our excellent author had confounded the guanaco with the largest species, and probably his description may be that of the glama, generally mentioned by travellers, as the chief and largest animal of this class; in which case the glama is an animal sufficiently distinct from the paco, while a genuine description of the guanaco is still wanting, if it be not indeed the same animal with the chilihueque, the wool of which is still reserved, as he informs us, for the most precious stuffs; but unlike the uniform colour of the vicuna, these animals are sometimes white, brown, black, grey. Ulloa, however specially mentions, that the glama has no hunch, and describes the guanaco as having a very coarse wool; in which case it would hardly be exported, so that his accuracy may fairly be questioned.* Dobrizhoffer has given an account of the guanaco which he describes as different from the glama, the vicuna, the paco, the *macomoro* and the *taruga*: he specially says that the guanaco has a hunch, and adds that the hair serves to make hats.† It is surprising that the description of these singular and interesting animals should still remain so obscure.

The American tiger or *jaguar* is chiefly known in Paraguay, and the forests to the north; and the *puma*, by some called the American lion, is little mentioned. The latter is of a reddish brown colour, while the former is marked with black spots upon a yellowish ground. But from Buffon's account of the jaguar, it is evident that he judged only from a small animal, probably sent from French Guiana; for Dobrizhoffer informs us, that as the lions of Africa far exceed those of Paraguay (the pumas) in size and ferocity, so the African tigers yield in magnitude to those of Paraguay. He saw the skin of one killed the day before, which was three ells and two inches in length, or equal to that of a large ox; but he adds, the body is more slender than that of an ox.‡ According to

* Voyage and Memoirs.

† Dobriz. i. 298.

‡ Ibid. i. 283.

the

ZOOLOGY.

the same author, they kill and carry off oxen and horses; and he gives such singular instances of their strength as to evince the error of Buffon's theory.* Other animals are, the wild cat, the elk, the ant-bear, a kind of deer, &c.† In the great river Marañon, there appears to be a species of hippopotamus. In the alps, towards Tucuman, the condor is not unfrequent: it is a kind of vulture, with a red crest, the body being black, spotted with white.‡ A species of ostrich is also found in the wide plains of Paraguay, and in the neighbourhood of Buenos Ayres. What is called a partridge abounds in the Pampas. A serpent of prodigious size is sometimes seen in the mountain forests, and seems to approach the buio of the Orinoco. In the environs of San Miguel of Tucuman may be observed, in passing the high roads, many white threads of various sizes twisted in the trees, with others at the distance of six yards, so delicate as only to be perceivable with the reflection of the sun, when they shine like threads of silver.§ On these threads a kind of animal, like a very small beetle, runs with great swiftness; while on the large threads may be observed dead insects of the form of a common spider, and the colour of a boiled lobster, being the spiders in a

* Bouguer, p. xviii. says that the tigers are as large and fierce as those of Africa: they are happily few in number, one or two being sufficient to desolate a province. These, with the tiger of Guiana marked with black longitudinal stripes, (Bancroft, p. 137.) seem unknown to Buffon and other zoologists. Pernetty, in his account of Bougainville's voyage, p. 141, observes, that the tigers near Montevideo, are larger and more fierce than those of Africa; a tame whelp, four months old, was two feet three inches in height. After all, my excellent friend Mr. Browne, whose travels in Africa are well known, assures me, that he doubts greatly whether the tiger be an African animal; and perhaps even the panther is only a variety of the leopard. The tiger above mentioned, must therefore be the common tiger of Asia, as distinguished from the royal tiger.

† A tame deer kept by Dobrizhoffer, i. 310, became very fond of books, and he fed her with a system of philosophy, which had formerly occupied him three years. This was truly philosophic.

The *caragua* Dob. i. 314, is by the Spaniards called the devil of the mountain; the marks of their feet resemble those of a youth of fourteen, and they are said to resemble the fauns of the poets. They are shy and solitary, and seldom attack mankind.

‡ The largest bird is the condor, frequent, on the Alps of Tucuman, the expanse of the wings being sometimes sixteen feet. Dob. i. 341. The smallest is the *picaflor*, a pretty Spanish name for the humming bird, of which our author counted nine kinds in Paraguay. The American ostrich is called *chuni* by the natives, and this indigenous term would be more appropriate. They are common in the fields of Buenos Ayres and Tucuman, black, white, and grey. The *mbiru* resembles a large pheasant, and the black feathers end in white. Some parrots are singularly docile. Dob. i. 134. The savages can render the feathers of any colour by tearing them off in spring, then robbing the part, and staining it with a dye. Ibid. 357. The swallows migrate in autumn, that is April.

§ Estilla, xx. 129.

state of transformation. The webs are wrought with exquisite art, by ZOOLOGY. all the insects in their turn, till they are strong enough to catch a bird. Of these threads the labourers make cords for their hats which are very elastic, the natural colour being that of the balls of the silk worm.

These insects seem peculiar to the *aromo*, a kind of shrub not uncommon in the country, which might in all probability be cultivated like the plant of the cochineal insect, and the article become an object of manufacture.*

The mines form a grand object in the new viceroyalty, and are Mineralogy. chiefly in the provinces formerly strictly considered as Peruvian; for in fact Charcas, Tucuman, and even Buenos Ayres, were all regarded as dependencies of Peru, before the grand alteration of 1778. If New Spain be excepted, the upper part of the viceroyalty of *La Plata*, justly deserves the appellation given to the viceroyalty, being the richest country in *silver* which has yet been discovered on the globe, and not to speak of Potosi, the mines of gold and silver may be said to be innumerable. Lipes, Chichas, Porco, the chain of Aullagas pervading Chayanta, Oruro, Paria, Carangas, Sicafica; in short, it may be said that all the northern provinces teem with mineral opulence, while Laricaja and Carabaya are distinguished by virgin gold.†

Many of these mines are abandoned, not from the failure of the mineral, but from slight irregularities in the veins. There are traders who purchase the gold and silver, and when they have acquired three or four pounds weight of the former, they make a *tejo*, or round mass, and

* Among about twenty kinds of serpents in Paraguay, (Dob. ii. 315.) the rattle snake is not uncommon. Most of the snakes are fond of warmth, seek the houses, and even the beds. The bite is cured with the root of a plant resembling the lily; and by our author's account musk is the surest antidote against all insects. If they enter the ear, cold water must be injected, when they instantly come out or are drowned. The bite of the wasp is cured with tallow, which has been previously melted down. The bug is only known among the Spaniards, and does not haunt the Indian towns, yet they seem natives of America, and breed in a kind of melon, whence they will inundate a whole garden. The number of large frogs is prodigious, and their noise intolerable. Locusts form almost an annual pestilence, and are of a great size, often exceeding the length of the middle finger. There is also a prodigious number of beautiful fire flies, and other insects which emit light. Several woods will also when rotten, (ib. 389,) emit phosphoric hues, red, blue, green, or yellow, of exquisite beauty, as observed by our author in the wild forests, between the rivers Acara and Monday. When brought home, the beautiful spectacle may be continued by repeated moisture. The butterflies rival the flowers in brilliancy and variety.

† Estalla, xxvii, 300.

MINER-
ALOGY.Bank of
Potosi.

with two hundred marks of the silver form a bar or ingot, at the nearest royal station where the metals are assayed. They afterwards carry the tejos and bars to the mint, where they are purchased on the king's account, with a due profit to the sellers. This traffic however is accompanied with anxiety and labour, and requires economy. In imitation of this branch was founded the company of dealers in quicksilver at Potosi, which has also been styled for these forty years the Bank of Redemption. From its fund are supplied money, utensils, and other necessaries to expedite the work of the mines. The redemption of these produces such profit, that when it was divided, in the middle of last century, among the persons concerned, it amounted to more than one million of dollars. The chief object of the bank was to use the profits in assisting persons in urgent and accidental cases of the labour in the mines, so much exposed by nature to these events, and they thus continued to be employed till the year 1779, when it was yielded to the crown. In this bank his catholic majesty has a fund of 100,000 dollars, managed by three directors, and the benefits are not only extended to the mines of Potosi, but to those in the neighbourhood. The mark of rough silver is sold from seven to seven and a half dollars, according to the assay. The weekly purchases are from six to seven thousand marks, of which about five thousand are from the mountain of Potosi. The administrator of the bank brings this silver to the royal treasury, and in presence of the officers forms about thirty bars, each about two hundred marks, which are weighed, assayed, and delivered with the necessary formalities, to pay the duties of tenths and *covos*. The bars being numbered, and stamped by the officers of the royal treasury, the administrator of the bank proceeds to the mint, where they are sold according to the estimate of the assayer; so that the business of the bank or of the king becomes as simple as that of individuals.

Since the year 1735 the metals only pay a tenth, instead of a fifth, with $1\frac{1}{2}$ per cent. of *covos* an ancient duty given by the Emperor Charles V. to Don Francisco de los Covos, and afterwards assumed by the crown. Eleven and a half per cent. are then deducted for the dues of the bank, which yield to his majesty between three and four hundred thousand dollars. This bank, after paying the directors and officers rent and other expences, produces to the king a clear gain of about forty thousand dollars.

It has already been mentioned that the mountain of Potosi alone produces weekly about five thousand marks of silver, that is from thirty to forty thousand dollars, a circumstance, as our author observes, sufficient to fill the world with admiration at the prodigious and inexhaustible opulence of this mountain, which has been assiduously wrought since 1545.* At the beginning it was indeed more abundant, and the metal might be said to be pure; but at present it is somewhat reduced, and even inferior to some other mines, though it is always the most sure and permanent.

The benefit of the mines is open to all who choose to avail themselves of it, but labourers are not easily procured. Owing to the thinness of the population, scarcely one quarter can be found of the necessary number, Indians being always employed, and in this view no mine is so useful as that of Potosi, for every eighteen months there are sent from the provinces of the viceroyalty 6000 Indians, enrolled and divided into parties, in order to work in the mines. This expedition of Indians is called *mita*; and they are distributed by the governor of Potosi according to the funds of the several mines, each being paid four reals a day, and treated according to the ordinance, till they complete their periods of labour. Without this measure the benefits of the mine would cease, as no labourers could be found, the great and sometimes useless expences incurred, and the loss which the royal treasury would sustain, if these mines were abandoned, having rendered the *mita* indispensable, and it is conducted with all possible humanity.

* This mountain, of a conic form, is about 20 B. miles in circumference, and perforated by more than three hundred rude shafts, through a firm yellow argillaceous schistus. There are veins of ferruginous quartz, interperfed with what are called the horn and vitreous ores. Of a peculiar dark reddish colour, this mountain rises void of all vegetation, blasted by the numerous furnaces, which in the night form a grand spectacle. This surprising mine was discovered, 1545, by Hualpa a Peruvian, who in pursuing some chamoyos pulled up a bush, and beheld under the root that amazing vein of silver afterwards called *la rica* or the rich. He shared this discovery with his friend Huanca, who revealed it to a Spaniard his master; and the mine was formally registered 21st April 1545. Specimens are not common in Europe; the silver often shoots in threads through a quartz approaching to agate.

In the province of Carangas, about 70 leagues W. from La Plata, are found in digging in the sands, detached lumps of silver called *papas* (potatoes) being formed like that root. Ulloa, lib. vii. c. xiii. Near Puno was a celebrated silver mine, from which the pure metal was cut with a chissel. lb. c. xiv.

MINER-
ALOGY.

Latterly metal of base alloy has become more abundant, but sometimes lumps of pure gold or silver are found, which are called *papas*. The poor also occupy themselves in *lavaderos*, or washing the sand of the rivers and rivulets, in order to find particles of the precious metals. In the metallurgy quicksilver is indispensable, an arroba, and a little salt, being used for every fifty quintals of the mineral. The houses where the rock or stone is pounded are called *ingenios*, a name also given by the Spaniards to sugar mills. Those of Potosi are magnificent and expensive, and are moved by water, though it be scarce and occasion many disputes. To estimate the riches of the mine or pit, if a certain proportion of the mineral yield ten marks, it is esteemed rich, if eight or six middling, and if less poor; but at Potosi even two marks are advantageous to the adventurer.

The other mines are little permanent, being often lost in water, or the works giving way, or the vein failing, or the miner not being able to support the expences; but in recompence rich and new mines are daily discovered. They are all found in the chain of mountains, commonly in dry and barren spots, and sometimes in the sides of the noted *Quebradas*, or astonishing precipitous breaks in the ridges. This rule, however certain in the viceroyalty of Buenos Ayres, is contradicted in that of Lima, where, at three leagues distance from the Pacific not far from Tagna, in the province of Arica, there was discovered not many years ago the famous mine of Huantajaya, in a sandy plain at a distance from the mountains, of such exuberant wealth that the metal is cut out as if with a chissel; and a large specimen of virgin silver may be seen in the royal cabinet of natural history at Madrid. This new mine has attracted around it a considerable population, though there be neither water nor pasturage for cattle, nor the common conveniences for labour.

Such abundance of metals is produced in the northern parts of the viceroyalty of La Plata, that in the mint of Potosi there are annually coined about 6,000,000 dollars; and our author supposes that the contraband trade is inconsiderable, as the remittances to Spain are found to correspond with the produce; and he adds that all the mines of the viceroyalty may yield about 16 000,000 dollars: but this account must be compared with that of Helms which shall be subjoined.

Besides

Besides gold and silver, copper is found at Arbicoya near Oruro, and in the district of Lipes. A rich mine of tin is worked at Guanuni in the district of Paria; and abundant mines of lead in the province of Chichas.*

The following is the state of the mines in the new viceroyalty of Buenos Ayres, as reported by Helms.

NAMES OF PROVINCES.			Gold	Silver	Copper Mines.	Tin	Lead
Tucuman	-	-	2	1	2		2
Mendoza	-	-		1			
Atacama	-	-	2	2	1		1
Lipez } Province of Potosi			2	1	1		1
Porco }			1	2	1		
Carangas	-	-		2	1		
Pacajes or Berenguela	-	-		1			
Chucuyto	-	-		2			
Paucarcolla, Town Puno	-	-		1			
Lampa	-	-		2			
Montevideo	-	-	1				
Chichas and Tarija	-	-	4	5			1
Cochabamba	-	-	1				
Sicaica	-	-	2				
Laricaja	-	-	4				
Omasuyos	-	-	4				
Azangaro	-	-	3				
Carabaya	-	-	2	1			
Potosi	-	-		1			
Chayanta	-	-	2	3	1	1	1
Mizque	-	-		1			
Paria	-	-		1		1	1
Total			30	27	7	2	7

* The Indians who work in the mines commonly chew the leaves of the *coca*, (*Erythroxylum Coca*) a little plant about two feet high, chiefly cultivated in La Paz, and yielding three harvests a year. This plant so much invigorates the Indians that they can bear almost any fatigue; while, according to Alcedo, it burns the mouth of Europeans. In New Granada it is called *bayo*; and somewhat corresponds with the betel of the East Indies.

MINER-
ALOGY.

The same author has given the following statement of the whole coinage in Spanish America, from the first day of January, to the last day of December, 1790, taken from the official register.

	In Gold.	In Silver.	Total.
At Mexico,	628,044 Piaftres ;	17,435,644 Piaft. ;	18,063,688 Piaft.
At Lima,	821,168	4,341,071	5,162,239
At Potosi,	299,846	3,983,176	4,283,022
At Santiago, Chili	721,754	146,132	867,886
Total	2,470,812	25,906,023	28,376,835

To account for the great difference of produce between the mines of Mexico, and those of Peru, Chili, and Buenos Ayres, Mr. Helms alleges the following reasons : 1. because the kingdom of Mexico is much more populous than any other of the American provinces : 2. it is scarcely half the distance from the mother country, whence it is enabled the better to enforce obedience to the laws and regulations, habits of industry, good police. and economy : 3. the want of royal and private banks in Peru, where every thing is still in its primitive chaotic state ; and lastly, on account of the great encouragement which the industrious miner readily obtains in every commercial house of Mexico. If, concludes Helms, the provinces of Peru, Chili, and Buenos Ayres, were in a similar favourable situation as that of Mexico, there is no doubt, that in Peru alone, on account of its incomparably richer, and more numerous gold and silver mines, four times the quantity of these noble metals might be obtained, and perhaps a still greater proportion, than what Mexico affords at present.

Natural
Curiosities.

Among the natural curiosities of this viceroyalty, may be named the bridge over the river Mendoza, already mentioned. Another singular object is observable in the province of Chaco, about eighty leagues from Santiago del Estero in the lat. of 27° or 28°, and about thirty leagues from Corrientes. This is a mass of native iron, which from N. to S. is about 3½ varas in length, and two from E. to W. having been discovered in these directions ; and on raising it, it was found to be half a vara in thickness.* Hence it will appear from these measures, which

* Edalla, xxvii. 321.

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yield 156 Spanish cubic feet, or nearly 133½ French, that this block will weigh about 114 quintals. The ground for many leagues in circuit is very level and sandy, and void of water, nor has any been found upon digging, yet some trees appear around. The face of this mass is open and exposed, on a level with the ground, and the rest buried. The upper face is full of rifts or irregularities; pieces hewn out with a chissel, shew a brilliant colour like fine silver, speckled with spots, yellow and red, with some of a fine mulberry colour; although there be no appearance of bittumen or salt, the smell decides the contrary, for a little furnace being put under the mass, there arose a fetid odour which spread to a considerable distance. The viceroy having received specimens, he gave some to an artisan, who found them rusty; placed in the forge they were easily joined, and were hammered, and excoriated during the operation, like any other iron, could be drawn into wire, &c. and did not lose so much as other iron. The filings and excoriated sparks were attractable by the magnet, but this operation was not tried before it was manufactured, From these circumstances, it may safely be inferred, that this mass is of pure and ductile iron, and even of a superior quality to many, while it bears no marks whatever of having been fused. The learned reader will recollect the other examples of native iron found in Siberia by Pallas, and in other parts, though rarely, by other mineralogists. This native iron is commonly interspersed with olivine or peridot, a stone which to flint adds a considerable portion of magnesia; and the green colour of the chrysoprase having been found to be owing to nickel, which thus converts semiopal into that stone, the presence of nickel may be suspected in the olivine. If this induction be just, the component parts of these blocks of native iron, as joining with that metal flint, magnesia, and nickel, are precisely the same with those of the stones which have fallen from the firmament in various countries, a phenomenon now completely ascertained and admitted by the most incredulous; and in the rotation of the earth, the largest masses may naturally be attracted by the widest continents, as in Siberia and South America.

Near Jujuy, there is a singular volcano which might appear the palace of Eolus, where the winds were imprisoned, for they rush forth in the morning

NATURAL
CURIOSI-
TIES.

NATURAL
CURIOSI-
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morning with such whirls and dust, that they astonish those that are not accustomed to the phenomenon.* These winds, though they lose their violence in proportion to their distance from their source, are yet extremely troublesome, till the traveller pass the Quiaca, which is the first post of the jurisdiction of Chichas. † Not far from Cordova, on the banks of the river Pucara, at a place where lime is made, Dobrizhoffer assures us, that in a calm and clear night, he has heard noises resembling the firing of cannon at the siege of a fortress; and people who live in the neighbourhood, assured him that this thunder was heard almost daily from the neighbouring rocks, where the air seems to be shut up, and to escape with violence by small apertures. In Cordova itself, it is common to hear in the night a dull sound, like that of a wooden pestle in a mortar. This melancholy murmur passes from street to street, and is called by the Spaniards the Pison, which signifies the rammer used by the paviours: our author, who had observed this sound for two years, does not doubt that it proceeds from a subterranean wind, for the ground on which the town stands is hollowed and rent with frequent earthquakes.‡

* Estalla, xx. 139.

† Humboldt says that near the coast of Paria, in Caracas, or Cumana, there is also a noisy volcano of air.

The Hill of Faces among the Guaranis is a natural curiosity, Dob. i. 233, it is so called because the stones bear a rude resemblance of the human face.

‡ Dobriz. vol. i. 46.

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CHAPTER II.

VICEROYALTY OF PERU.

Boundaries.—Provinces.—Peruvian History, Language, and Antiquities.—Government of the Viceroyalty.—Population.—Revenues.—Cities and Towns.—Commerce.—Climate and Seasons.—Botany.—Zoology.—Mineralogy.

THIS celebrated region is not unfamiliar even to the common reader, history and romance having diffused a peculiar glory around the Incas; and the voyages of Ulloa and the French mathematicians, sent to measure a degree under the equator, are generally known. Only some notices therefore, chiefly relating to the present situation of this interesting country, shall be selected; and the materials shall be principally chosen from the work of Estalla, which, amounting to forty volumes, and being written in the Spanish language, will to most readers present the charm of novelty.

The limits of the kingdom of Peru were greatly restricted during the course of the last century, as in 1718, the provinces of Quito in the north, as far as the river Tumbez, were annexed to the viceroyalty of New Granada, which has an easy intercourse with Europe, by the harbour of Carthagena, and the intermediate station of Havana; and in 1778, a number of opulent provinces in the south of Peru, were allotted to the new viceroyalty of La Plata.*

* Estalla, xx. 147.



BOUNDARIES.

Modern Peru therefore extends N. and S. from the river Tumbez to the chain of Vilcanota, being, by the computation of Estalla, 289 g. leagues; but along the coast to the river Loa, the length may be 423 leagues. The irregularity of its breadth offers a medium of about 80 leagues, so that the contents may be 33,630 leagues square.

According to the map of La Cruz, the southern extremity of the chain of Vilcanota being 15° , and the river Tumbez in $3^{\circ} 30'$, both S. lat. the difference of $11^{\circ} 30'$, will yield 690 g. miles: but that long strip, called the province of Arica, extending to the river Loa $21^{\circ} 15'$, there is an addition of about $6^{\circ} 15'$ or 375 g. miles in the nominal length. On the N. the viceroyalty of Peru borders on that of New Granada; on the N. E. with the Pampa del Sacramento; on the E. with the savage nations of the Pajonal;* on the S. E. with the viceroyalty of Buenos Ayres, which embraces the province and desert of Atacama, formerly the boundary between Peru and Chili.

Provinces.

The provinces or rather districts of the Peruvian viceroyalty, which are still very numerous, are as follow, proceeding from S. to N.

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| 1 <i>Arica</i> | 17 <i>Castrovireyna</i> |
| 2 <i>Arequipa</i> | 18 <i>Vilcasuaman</i> |
| 3 <i>Canes and Canches</i> | 19 <i>Huanta</i> |
| 4 <i>Paucartambo</i> | 20 <i>Angaraes</i> |
| 5 <i>Chilques</i> | 21 <i>Yauyos</i> |
| 6 <i>Chumbivilcas</i> | 22 <i>Canete</i> |
| 7 <i>Guanacavelica</i> | 23 <i>Guarobiri</i> |
| 8 <i>Aymaraes</i> | 24 <i>Jauja</i> |
| 9 <i>Cotabamba</i> | 25 <i>Tarma</i> |
| 10 <i>Cuzco</i> | 26 <i>Canta</i> |
| 11 <i>Abancay</i> | 27 <i>Checras</i> |
| 12 <i>Calca y Lares</i> | 28 <i>Huanuco</i> |
| 13 <i>Andahuaylas</i> | 29 <i>Caxatambo</i> |
| 14 <i>Parinacochas</i> | 30 <i>Santa</i> |
| 15 <i>Lucanas</i> | 31 <i>Huaylas</i> |
| 16 <i>Ica</i> | 32 <i>Conchucos</i> |

* This is a vast steep covered with strong grass, whence the name; but Peru may be said to include Colonna, or the Land of the Missions, which depend on the Viceroy, and thus reach to the Portuguese frontier.

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|-------------------------|---------------------------|
| 33 <i>Pasas</i> | 38 <i>Caxamarca</i> |
| 34 <i>Caxamarquilla</i> | 39 <i>Chachapoyas</i> |
| 35 <i>Huamachucos</i> | 40 <i>Lamas</i> |
| 36 <i>Truxillo</i> | 41 <i>Luya y Cbilloas</i> |
| 37 <i>Sana</i> | 42 <i>Piura</i> .* |

PROVINCES.

A few of these provinces have been described by our author as Truxillo, Tarma, Piura, Caxatambo, Chachapoyas, Canes and Canches; and he has greatly enlarged on the new missions to the country called *Montana Real*, on the eastern side of the Andes, towards the river Ucaia or true Marañon, and the various passages by which these mountains may be crossed in that direction. Some idea of these missions and researches has already been given in tracing the sources and progress of the grand river Marañon, and this curious subject will be further illustrated in the account of the Native Tribes; the travels of father Girval, in 1792, and the following years having thrown a considerable light on that obscure part of America.

It is to be regretted, that our author has not given us a list of the Intendancies, into which the Spanish colonies in America were divided in 1784, instead of the former *Corregimientos*, which were found too minute, while the little magistrates were subject to ignorance and corruption.† The Intendancy of Tarma, for example, comprehends eight of the above districts. The extreme northern province of Piura belongs to the Intendancy of Truxillo; and borders on the E. with the province of Jaen de Bracamoros, which belongs to the viceroyalty of New Granada: on the N. with Loja, belonging to the presidency of Quito; on the S. E. with Caxamarca; and on the N. E. with Guayaquil.‡ In the vallies of Piura, the temperature is excellent, and the sky serene; while the mountainous part towards the Andes is tempestuous, cold, and cloudy. The rains, according to our author, diminish at certain periods of six, eight, or ten years, but the longer the period, the more abundant is the fall. Melons, water melons, calabashes, cotton shrubs, and a great variety of plants and flowers decorate this province without

* Some small districts are omitted, such as *Collahuas* called *Co Halmus* in the English copy of La Cruz's map, which swarms with errors.

† See the Mineralogy.

‡ Estalla, xxi. 5.

PROVINCES. cultivation. The river Tumbez, which bounds it on the N. springs from the snowy chain of Loja. The most noted sea port is that of Payta, taken by Anson in 1741, who disgraced his arms by burning the town, because he did not find the wealth he expected. At Tumbez, landed Pizarro the future conqueror of Peru. On the shore of Piura is found the noted plant barilla. The old town of Tumbez, now ruined, was founded in 1531 by Pizarro, being the most ancient settlement in Peru; and the situation of the new town cannot be admired, as the sand of the sea begins to gain on the streets. The chief products are cattle and cotton; and a considerable trade is carried on in cascarilla.

The most southern inland province of the Peruvian viceroyalty is that of Canes and Canches, bounded or pervaded by the Apurimac or genuine Marañon.* In his account of this province Estalla gives an interesting description of the Apurimac and Vilcamayo, already transcribed in discussing the sources of the Marañon. Near its source the Vilcamayo is passed by a natural bridge, the fourth example of the kind in America. This province not only abounds in cattle and sheep, but also in pacos, which multiply surprizingly in the cold and barren soil; in the heights and skirts of the Cordillera there is also a great number of guanacos, vicunas, pacochas, venados a kind of deer, viscachos a kind of rabbits, partridges, and quails, and many birds of prey: the mountains contain gold, silver, copper, loadstone, lead, tin, and even quicksilver. The name of Canes and Canches is derived from two tribes who originally held the country, and were conquered by Roca the second Inca. There still exist the ruins of a temple dedicated to the idol Viracocha. The language generally spoken is the Peruvian or Quechua; the chief town Siquani contains about 6000 souls, but only 92 Spaniards; and the articles of culture are *papas* a kind of potatoe, beans, wheat, barley. This province is governed by a judge, a delegate of the Intendant of Cuzco. The judge selects the *mita* or Indians for the mines, and names the greater alcalds for each village, who with the cazics and chiefs of the Indians, elect the ordinary alcalds and other officers. The miners are judged by a delegate, named by the royal tribunal of mines at Cuzco. There is a regiment of dragoons consist-

* Estalla, xxi. 90.

ing of thirteen companies. The trade is in cattle and woollen cloths, to PROVINCES. Cailloma, Arcate, Cayarani; and in the other mining stations are sold meat, papas, and other articles; but the weaving is the most flourishing business. The Indians bring wine, brandy, and cotton from the coast. Others willingly go to work in the mines of Condoroma, Arequipa, Condesuyos, and Cailloma; but those who by the royal ordinance pass to Potosi are unwilling travellers, as they generally die of asthma. The day of their departure is very melancholy, and after a solemn mass by the curate, which they pay, and his blessing, which is given gratis, they assemble in the square, accompanied by their fathers, relations, and friends; and, amidst embraces and tears, depart with their wives and children for their destined labour. It would be worthy of the generosity of the Spanish monarchy to find other means of working the mines of Potosi; and this is perhaps the only cruelty of which it can be accused.

This brief description of the two frontier provinces may not be un- Peruvian History. interesting in a geographical point of view, the present limits of Peru being little understood, even by geographers themselves. From what country the ancient Peruvians proceeded has been matter of considerable disputation; but while the Mexicans bore many marks of innate African cruelty, the Peruvians display the mildness of an Asiatic tribe. The monarchs and ruling people seem to have been very distinct from the general population. The series of the Incas, and their names, frequently occurring in books of voyages and histories, it may not be improper to subjoin them.*

1. *Manco*, the first Inca, is supposed to have reigned in the twelfth century: † declaring himself and his sister, Oello, children of the sun, he married her; and after many laws and institutes to reclaim a savage race, received from his people the title of *Capac* or *rich in virtue*. He founded the temple of the sun at Cuzco, the capital of his empire, and appointed virgins of the royal blood to serve that divinity.

* The old name of Peru is *Tubuntin*, or *Tabuntin-Supu*, the latter word implying country. In the Quechua *paleu* is a river; and the new name was imposed from some mistaken notion of the rude conquerors. There are similar errors in *Congo*, &c.

† Perhaps the 13th. Fifteen reigns to 1532, at 20 years each, yield 300 years for the duration of the monarchy.

2. *Sinchi-Roca*,

PERUVIAN
HISTORY.

2. *Sinchi-Roca*, or Roca the brave, son of the former. He extended his dominions about sixty miles to the south of Cuzco.

3. *Lloque-Yupanqui*, who subjected many tribes, and extended his kingdom, or empire, in many directions.

4. *Maita Capac*, son of the former, also subdued several districts, and erected some edifices.

5. *Capac Yupanqui*, another conqueror.

6. *Inca-Roca* also subdued several little districts and tribes.

7. *Yabuar-Huacac*.

8. *Inca Ripac*, with an army of 30,000 men, conquered many provinces; and the chief of Tucma or Tucuman is said to have paid homage at Cuzco.

9. *Inca Urco*, deposed after eleven days.

10. *Pachacutec* subdued Jauja, Tarma, and other provinces.

11. *Yupanqui* the third carried his conquests to the river Mauli in Chili; and over the Mojos, far to the E. of the Andes. About 1430.

12. *Tupac Yupanqui*, also a conqueror.

13. *Huayna Capac* subdued as far as Tumbez, nay the kingdom of Quito, which he left to Atahualpa, and his own sceptre to his eldest son.

14. *Inti-Cusi-Hualpa*. He fought a bloody battle with his brother in the neighbourhood of Cuzco, but lost the day, and was made prisoner.

15. *Atahualpa*, the usurper, reigned at the time that Pizarro landed at Tumbez; and was made prisoner in a battle with that conqueror near Caxamarca. He was beheaded in prison, a punishment which he had inflicted on his brother and legal sovereign.

16. *Manco Capac*, crowned with permission of Pizarro at Cuzco. Afterwards defeated by the Spaniards, he retired to the mountains, and is thought to have died about 1553.

17. *Sayri Tupac*, the last of the Incas, emperors of Peru. He resigned the sovereignty to Philip II. of Spain, and died a christian, leaving only one daughter who married Onez de Loyola, a Spanish knight, from whom descend the marquises of Orepefa and Alcanises.*

From

* This list is from Alcedo, *voce Peru*. Dr. Robertson's account of the conquest of Peru, (Hist. Am. III. 143,) is so rapid as to be wholly unsatisfactory. Atahualpa is seized at Caxamarca, and

From this brief recapitulation it may be perceived that the monarchy of the Incas, extending from the river Tumbez 31° (not to speak of the subjection of Quito,) to the river Mauli in Chili, 35° , that is $31^{\circ} 30'$, or nearly 1900 g. miles, may well deserve the name of an empire; while the Mexican princes only ruled a country of about one third of the extent, and which might be honoured by the title of a kingdom. The comparative magnificence of the Peruvian monarchs is not therefore matter of surprize. But a critical examination of the Peruvian history, and a discussion of the materials with which it is constructed, might afford a curious topic for some enterprising antiquary, who had visited the country; and the learned are far from being satisfied with the production of Garcilasso de la Vega.

Among the native nations of America the Peruvians are by far the most interesting, having in some instances advanced nearer to civilization than the Mexicans. The glama, which may be called a small camel, had been rendered subservient to their industry; and their buildings, erected of stone, still remain, while of the earthen edifices of the Mexicans, even the ruins have perished. The history of the Peruvian monarchs is indeed vague and unsatisfactory: the noted Quipos somewhat resembling the Wampum of the North Americans, being brief and transitory records. The government of the Incas was a kind of theocracy, and the inhabitants revered a divine descent, not claimed by the Mexican monarchs. The religion of the Peruvians was that of love and beneficence; while the Mexicans seem, in their cruel rites, to have been wholly influenced by the fear of malignant deities. Some sacrifices

and the conquest effected in a page, without any preparation for such a decisive event; while the paltry disputes of the Pizarros and Almagros are detailed with great prolixity! Another blemish in this excellent work is the repetition of the name Pizarro, without any prefix, while it belongs to three or four different persons, who successively appear on the stage.

1. Francis Pizarro the Conqueror, slain 1541.
2. Gonzalo Pizarro, governor of Peru 1544, brother of the former, executed 1548.
3. Juan Pizarro, another brother, iii, 165, 172; killed 1536.
4. Ferdinand Pizarro, 173, 183, another brother, imprisoned at Madrid 1539, where he continued twenty years in captivity.

To give any clearness to the narrative, it was indispensable to have prefixed some account of all the brothers.

PERUVIAN
HISTORY.

of the smaller animals, and offerings of fruits and flowers, formed the chief rites of Peruvian superstition. The Mexican monarchy was founded by the sword; the Peruvian by superiority of wisdom: and the captives taken in war were not immolated, but instructed in the arts of civilization. An excellent writer justly pronounces, that the Peruvians had advanced far beyond the Mexicans, both in the necessary arts of life, and in such as have some title to the name of elegant. * Manures and irrigation were not unknown, though a kind of mottoc formed the chief instrument of agriculture. Their edifices were sometimes of bricks hardened in the sun; but others were constructed of large stones, the walls however never exceeding twelve feet in height. The great roads are indeed slight and perishable, when compared with European exertions, yet become wonderful, when estimated with the other parts of savage America. Their weapons and ornaments also displayed no small degree of skill, particularly in cutting and piercing emeralds, a gem it must be confessed of no great hardness. Amidst all these laudable qualities, it is to be regretted, that superstition led them to sacrifice numerous victims on the death of a chief; and a favourite monarch was sometimes followed to the tomb by a thousand slaughtered servants. Had the conquest of America been effected by the Spaniards at a period like the present, when European warfare has lost half of its ferocity, the Peruvian monarchy might have been respected and preserved; for in the other parts of South America there is a superabundance of the precious metals to satiate the utmost wish of avarice. Whether the ruling people be chiefly cut off, or it be the mere depression of slavery, it is impossible to discover in the manners of the Peruvian natives any marks of their ancient advancement.

Peruvian
Language.

The language of the ruling people in Peru was called the Quechua, and it is still cultivated by the Spanish clergy, as indispensable in the conversion of the natives. The sounds *b, d, f, g, r*, are wanting; but when the Spanish grammarians add the *w* and *x*, they forget that their own *w* is an *b* or */b*, and their *x* is equally expressed by *f*. The gram-

* Robertson, iii. 209.

mar of this language, and it is said even that of the Tehuels is nearly as PERUVIAN LANGUAGE. variegated and artificial as the Greek, whence our wonder at the refinement of the Sanscrit may perhaps suffer considerable abatement. As specimens of this celebrated dialect of the Incas are very rare, a few shall be here selected.*

1	Huc	<i>The eye</i>	Nauí
2	Yscay	<i>A fish</i>	Challhua
3	Quimça	<i>A foot</i>	Chaqui
4	Tahua	<i>A friend</i>	Cocho
5	Chumpi picheca	<i>Great</i>	Hatun
6	çocta	<i>A batchet</i>	Avri, champi
7	Canchis	<i>Hair</i>	Caspa
8	Puçac	<i>The head</i>	Uma
9	Yscon	<i>A bog</i>	Cuchi
10	Chunca	<i>A house</i>	Huaci
100	Pachac	<i>Land</i>	Allpa
1000	Huaranca	<i>Little</i>	Huchuy
<i>The arm</i>	Ricra	<i>A man</i>	Runa
<i>Beard</i>	çunca	<i>The moon</i>	Quilla
<i>Belly</i>	Vicça	<i>Mouth</i>	Simi
<i>Canoe</i>	Huampu	<i>Nose</i>	Cenca
<i>To die</i>	Huanny, Pitini	<i>Sea</i>	Atun cocha,
<i>A dog</i>	Alleo		mama cocha.†
<i>To drink</i>	Upiani	<i>Sun</i>	Inti
<i>The ears</i>	Rinri	<i>Water</i>	Unu, yacu
<i>To eat</i>	Micuni	<i>Woman.</i>	Huarmi.

These are chosen to correspond with Dr. Forster's list, which is alphabetical, and far from being well selected. Some others follow.

* From the *Arte y Vocabulario en la lengua general del Peru, llamada Quichua. Los Reyes* (Lima) 1614, 13mo. *pen. ant.* The Quechua is said to have been a new language, established by the Incas. The total abolition of any words held ominous by the savages of South America is a singular circumstance in the history of language. See Dobrizhoffer, ii.

† *Cocha* signifies a lake, and *mama* is mother.

PERUVIAN
LANGUAGE.

<i>River</i>	Mayu	<i>A lance</i>	Chuqui
<i>Mountain</i>	Puna, acha	<i>A ship</i>	Huampu
<i>Lake</i>	Cocha	<i>People or Town</i>	Llaeta
<i>Father</i>	Yaya	<i>The band</i>	Maqui
<i>Mother</i>	Mama	<i>Iron</i>	Quellay
<i>Husband</i>	Coça	<i>Gold</i>	Cori
<i>Son</i>	Churi	<i>Gold dust</i>	Chichi cori
<i>Brother</i>	Huauquey	<i>Silver</i>	Collqui
<i>Sister</i>	Panay	<i>Fire</i>	Nina
<i>Sand</i>	Aco	<i>Many fires</i>	Nina nina
<i>Good</i>	Alli	<i>Snow</i>	Riti
<i>Bad</i>	Mana alli	<i>Stone</i>	Rumi
<i>The Andes</i>	Anti	<i>An Emerald</i>	Umina
<i>A sacrifice</i>	Arpay	<i>The top of a mountain</i>	Uma
<i>Flesh</i>	Aycha	<i>Yes</i>	Y
<i>A family</i>	Ayllu	<i>No</i>	Mana
<i>The tongue</i>	Callu	<i>Beauty</i>	çumay
<i>King</i>	Capac	<i>Love.</i>	Cuyay, munay.*
<i>Queen</i>	Coya		

Antiquities.

While the Mexican antiquities chiefly consist of pyramidal tombs, the Peruvian are more diversified and of greater importance. A high road is mentioned, said to pass for not less than 400 leagues to the northern and southern provinces. The ruins of the temple of the sun at Cuzco are formed of stones fifteen or sixteen feet square, and which, though of the most irregular shapes, are so exactly adjusted that no void is perceivable. † This is what has been called the Pelasgian style of building, being found in the most ancient monuments of Greece and Italy; and if we judge from this circumstance the Peruvians were advanced to a considerable state of barbaric civilization. Many ruins are also found of

* They want B, D, F, G, R, X, Z, yet the R is here, but it is to be softly pronounced. The Quechua is declined by altering the terminations, as *Runa* a man, *Runap* of a man, *Runapac* to a man, &c. The verbs have also moods and conjugations, the terminations sometimes extending to great length.

† Bouguer, p. cv.

the edifices called *tambos*, where the Incas lodged when they travelled. ANTIQUITIES. Bouguer says that the walls are often of a kind of granite, and the joints very perfect; there are sometimes even moveable rings hewn out of the stone itself. The voyage of Ulloa may be consulted for other remains. Estalla has mentioned a monument of the power of the Incas, being the remains of a palace half a league from Truxillo near the sea. The practice of interring treasure in the tombs has led to their destruction; but evidences remain of canals watering the ground and artificial meadows. Subterranean passages appear leading from the fortresses, a last mean of retreat not unknown in Europe. The tombs, like those of other ancient nations, were barrows resembling natural hillocks; and in a space fenced off with stakes was placed the body, with various dresses, little images of gold, silver, copper, or clay, and various weapons and utensils: the treasures found in these tombs have sometimes been immense.* In those of the women were found round mirrors made of marcasite or compact pyrites, thence called the mirror of the Incas. Figures of quadrupeds, birds, and reptiles, have also been found. But such remains are better represented in prints, than even the most minute description; and it is surprising that no ingenious Spanish author has published a general collection of Peruvian antiquities, a work which would do honour to the monarch and the nation.†

The government of this viceroyalty is divided, like that of the others, into political and ecclesiastic. By the new constitution there are seven Intendants, and fifty-two sub-delegates, dependent upon them; and all are subordinate to the viceroy.‡ The divisions of the Intendancies are only accidentally indicated even by the most recent Spanish authors. The Royal Audience, erected in 1543, is now composed of a Regent, an office created in 1776, eight Oidores or judges, four alcalds of the court, and two fiscals, the Viceroy being president. It is divided into three chambers, several causes being judged in two by the Oidores, while in the third criminal causes are decided by the alcalds of the court.§

Spanish
Government.

* Estalla, xx. 348.

† Among the antiquities of Peru may be mentioned the obelisks and statues of Tiahuanacu, and the mausolea of Chachapoyas, which are conical buildings of stone supporting large rude busts; probably resembling those of Easter Island. *Merc. Per.*

‡ Estalla, xx. 151.

§ Ib. 165.

GOVERN-
MENT.

There is also a superior junta of the royal treasury, composed of the Viceroy, the regent of the Royal Audience, the dean of the tribunal of accounts, and other officers. The Tribunal of Accounts determines causes of the revenue. It is understood that each viceroy is to give in to his successor a detailed account of his administration, and of the condition in which he leaves the country. He is also bound to remain six months after his demission, that law suits may be brought against him, in case he have committed any act of injustice.

Church.

The archbishop of Lima has four suffragans, the bishops of Cuzco, Arequipa, Guamanga, and Truxillo. Besides the chapters of these bishoprics, there are 557 curates of the royal presentation.

Population.

The population of Peru never appears to have been great: and Bouguer has observed that the ruins of the ancient villages are generally at the distance of ten leagues from each other. According to Estalla the population of this viceroyalty, according to a census very recently taken, amounts to 1,076,122 persons of all sexes, conditions, and denominations, being composed of the three primary distinctions, Spaniards, Indians, and negroes, from the mixture of which result various casts and colours. The number of towns and villages is computed at 1460.*

Our author has endeavoured to account for the deficiency of population, when compared with the immense space it occupies. He observes that the population was still more thin before the Spanish conquest, and might rather be counted by thousands than millions. The imaginary depopulation has been imputed to the mines, in which theoretic writers have conceived millions to be employed, while in fact only a few hundreds have been at any time occupied in that direction; and it would be truly ridiculous to think that the Spaniards, whose very wealth consists in the number of Indians, should indulge themselves in their destruction. The laws issued by the Spanish monarchs for the protection of the Indians form models of justice and equity; and, though sometimes eluded, their effect is great. Under the Incas the subjects paid one third part of the products of their industry, while at present they only pay a capitation tax of six or eight dollars for the protection

* Estalla, xx. 150.

of the government. Except the few allotted to the mines, the others may be said to enjoy Arabian freedom. Though the present population have been estimated, so far as the documents could extend, to 1,100,000 inhabitants; yet as it is the interest of the Indians to conceal themselves, he supposes that it may really amount to 1,300,000. He proceeds to observe that the population of the viceroyalty of La Plata, in that part which was subject to the domination of the Incas, is supposed to amount to 1,500,000;* and although the presidency of Quito does not contain more than 700,000, there will result a total of 3,500,000: so that, the population under the Incas having been computed at 4,500,000, the decrease will be 1,000,000. The pestilence of 1720, and the small pox have greatly diminished the number of Indians; and yet more are destroyed by the use of spirituous liquors, which have not only been found destructive to the health, but pernicious to the generative powers; not to mention the frequent emigrations from Peru to the adjacent viceroyalties. In another part of his work he admits that in the central province of Caxatambo, there remain marks of a greater population than exists at present: and in repeating the causes of the decrease he mentions the measles, a disease very mortal among the children; and adds that the Indians, after wasting their means in wild festivals and riots, often pass the rest of the year in extreme misery and want, which cannot fail to abbreviate their lives.†

One of the chief sources of revenue is the coinage at Lima, which, as has been seen, amounts to more than 5,000,000 of piastres annually. The natural products may yield about 1,500,000; but while Estalla supposes that the royal treasury receives more than 4,500,000 dollars, there seems some exaggeration. The article of commerce will throw more light on this part of the subject.

The capital city of Lima, by the latest enumeration published in the *Mercurio Peruano*, has a population of 52,627; the monks and clergy

Cities.
Lima.

* It has already been seen that he computes the population of the viceroyalty of La Plata at 1,000,000, so that his present estimate seems only for the sake of argument. He might well have denied the pretended state of population under the Incas, which is as void of evidence as that of Spain under the Moors.

† Estalla, xxi. 40.

being

CITY.

being 1392, the nuns 1585. The Spaniards in general 17,215; with 3,219 Indians, and 8960 negroes, the others being mixed. This celebrated city has been so often described that it is unnecessary to insist on so trivial a theme. Thrice it has been nearly ruined by earthquakes in 1586, 1687, and 1746. In formal writings it is styled *Los Reyes*, or the city of kings, from the festival on which it was founded in 1535. The streets are 355, the houses 3941. The wealth of the city is chiefly derived from the mines in the provinces to the north and south: but agriculture prospers in the vicinity, and the fields feed numerous horses and cattle. The Indians of the coast supply fish from the bay of Callao, and the villages of Chorillo and Lurin.* There are no fabrics nor manufactures of any kind. The rich ecclesiastics, proprietors of entailed estates, military and civil officers, with physicians, advocates, attorneys, and artisans, may amount to 19,000; the rest being slaves or domestics.† The want of occupations leads many of the females to vice; and the men are rather inclined to sloth and indolence.

The *cabildo* or *ayuntamiento*, that is the municipal body of the city, enjoys particular privileges: and the revenue of the capital exceeds 36,000 dollars. There is also, since 1786, a judge of the police, assisted by an able architect and other officers. The population has certainly declined since the erection of the new viceroyalty of La Plata; and will probably continue to decrease, though it be computed that fourteen hundred of all sexes and conditions annually arrive as a supply; not to mention the Spanish girls who from the province of Piura in the north, and Ica in the south, come to dispose of their charms either in marriage or love, these provinces being celebrated for female beauty. This capital is of noted luxury, and the malls crowded with handsome carriages, the number of coaches and calashes being computed at fourteen hundred. Amusements are however rare, and literature neglected. The *Diario* a kind of newspaper was soon discontinued. The *Mercurio* was

* Estalla, xx. 164.

† Estalla, observes, p. 330, that all the assassinations and robberies are committed by freed negroes; and that if philanthropic declaimers knew their crimes they would moderate their zeal.

begun

begun in 1791, and twelve volumes have appeared; which among CITIES. many examples of false taste and puerile erudition present some important documents concerning history, geography, and commerce, especially those written by Lequanda. But most of the authors having passed to Spain, the work was abandoned in 1798. The most important articles are used by Estalla in his account of the Spanish colonies in South America, and have supplied much recent and important information for the present work. There is also published at Lima a Guide describing the cities and towns of Peru, and the products of the animal, vegetable, and mineral kingdoms; with the civil courts, and military force of the viceroyalty, and other objects; the expence of the publication being defrayed from a thousand dollars given by the royal treasury for two hundred and fifty copies. There is also published at Lima a gazette on the plan of that of Madrid. By a royal schedule of 1758 it was ordered that, in the royal hospital of St. Andrew, there should be a hall to teach anatomy.

The chief commerce of Lima is with Valparaíso, Concepcion, and Coquimbo in the kingdom of Chili, the isle of Chiloe; and Arica, Ilo, and Pisco in the south; towards the north with Truxillo, Pacasmayo, and Payta in the viceroyalty of Peru; with Guayaquil and Panama in the viceroyalty of New Granada; and with Realejo in Guatemala, and Acapulco in Mexico. This trade is conducted by ten ships, eleven merchant-frigates, nineteen packet boats, and a balandra or small transport; amounting in all to 351,500 quintals of tonnage, navigated by 460 seamen. The nature of this trade is minutely explained by the author, but little adapted to the present design.*

The royal university of St. Mark was founded in 1576, and is conducted on the plan of the Spanish universities. In the great square of Lima there is a noble fountain of bronze; and the city presents many of these useful objects. The theatre is a neat building, but the representations might display more taste. Coffee houses only began to be

* The seaport town of Callao having been utterly destroyed by an earthquake in 1747, a new town or village was immediately founded, at the distance of a quarter of a league, and called *Bellavista*. There is a fortress called San Fernando, with a sufficient garrison to defend the bay, which in the S. W. is fenced by a barren island called San Lorenzo. Here all the ships anchor about two leagues from Lima.

CITIES.

opened in 1771. Cock fighting is a favourite amusement on Sundays and festivals; nor are bull fights unknown.

Cuzco.

The second city of the viceroyalty of Peru is, beyond all comparison Cuzco, formerly the seat of the Peruvian monarchy. Alcedo estimates the population at 26,000, but it suffered greatly by a pestilence in 1720. Lima may be called the maritime capital of Peru, and Cuzco the inland metropolis. Proudly situated amidst the surrounding Andes, and boasting its origin from the first of the Incas, Cuzco still retains the majesty of a capital. The situation is unequal on the skirts of various mountains, watered by the little river Guatanay. The cathedral is large, rich, and handsome, and by many preferred to that of Lima; there are besides six parish churches, and nine convents. There are four hospitals, of which one is supported by the tolls of the neighbouring bridge on the Apurimac. A nunnery now stands on the situation where lived the virgins of the sun. In the college of St. Bernard are taught grammar, philosophy, and theology. The remains of the fortress of the Incas, built of irregular masses of stone, joined with considerable art; the subterranean passage which led from the palace of the Incas to the fortress, of a contrivance somewhat singular; the fragments of a pavement of stone which led to Lima, are no mean monuments of antiquity. The municipality obtained great privileges from the emperor Charles V. In size Cuzco is nearly equal to Lima; on the north and west are hills forming a semi-circle, but in the south and east is a plain. Ulloa describes the houses as mostly built of stone, and covered with very red tiles, the apartments being well distributed, and the doors richly gilded, while the furniture corresponded with this magnificence.

Truxillo.

The other cities or chief towns of the viceroyalty of Peru are the three other bishoprics, already mentioned, of Arequipa, Guamanga, and Truxillo. Arica and Oropesa have declined; nor is Piura of much consequence. Truxillo seems to be one of the most important of these cities, but the situation is exposed to earthquakes, the last being that of 1759. In 1686 Truxillo was fortified against the buccaneers, constituting with Lima the only two fortified cities in the viceroyalty. Till the new system of Intendancies was established in America this city was governed by a corregidor, without any authority over the eight other districts.

districts. The Intendant is the chief of the municipality, which consists of two alcalds, twelve regidores, and other officers. The revenue of the bishopric in 1788 was computed at 25,000 dollars. The population of the whole district is computed at 12,000 : that of the city at 9000. The chief products and articles of commerce are wheat and sugar.*

Arequipa was founded by Pizarro in 1536, in the valley of Quilca, twenty leagues from the Pacific, beneath the mountain Omati covered with perpetual snow. The climate is rather dry, benign and healthy ; and the houses neatly built of stone, while the river Chile bathes its fields and gardens. There is a handsome fountain of bronze in the great square, and an elegant bridge over the river. This city has repeatedly suffered from earthquakes, especially in 1785, before which time the population was computed at 30,000. Guamanga was also founded by Pizarro in 1539 in a wide and beautiful plain, watered by a river, and crowned with perpetual spring. The buildings are of stone ; and thought superior to any in Peru ; while the gardens, squares, and cheerful entrances of the city, decorated with trees, recommend a residence at Guamanga. The chief trade is in leather, grain, and fruit. In the district there is a fountain which, like the baths of St. Philip in Tuscany, quickly impregnates a mould with a white and transparent stone. The state of the population of these two cities is not given by Alcedo.

Guancavelica was founded in 1572 by the viceroy Don Francisco de Toledo, second son of the count d'Oropesa, whence he gave it the name of the *Villa Rica d'Oropesa*. It stands in a *quebrada* or break of the Andes, and is one of the largest and richest cities of the viceroyalty. The temperature is very cold, and the climate changeable, as it sometimes rains and freezes on the same day, with tempests of thunder, lightning, and hail. The buildings are mostly of a kind of tufa, found near a warm spring in the vicinity. There is a dangerous torrent which is passed by several bridges. A grand mine of quicksilver in the neighbourhood was discovered in 1563 ; it was managed by a company of forty who delivered the quicksilver to the king at a certain price : but a fire in 1760 destroyed many of the works, and the mine is since in considerable decay.

* Estalla, xx. 325.

CITIES.
Jauja.

Jauja is only remarkable for some manufactures of woollen cloths, and mines of silver.

Lambayeque.

Lambayeque is in a pleasant and fertile situation, two leagues from the sea, and bathed by a river of the same name. The high road from Piura to Lima passes through this town. Some wine is made in the vicinity, and the poor are occupied in weaving coarse cotton cloths. The inhabitants are estimated at more than 8000.

Caxamarca.

Caxamarca is a large and beautiful though irregular town, with more than 12000 inhabitants, and among them many illustrious families descended from the conquerors. The Indians of Caxamarca are reputed the most industrious in the viceroyalty. The temperature is benign, and the soil fertile; and there are several mines in the neighbourhood. Here Atahualpa the last Inca was slain, and a stone is still shewn in the chapel of the prison where he died, being formerly the site of his palace. Towards the east are warm baths called the baths of the Incas.

Ica.

Ica is supposed to contain about 6000 souls, and is chiefly remarkable for a manufacture of glafs.

Guanuco.

Guanuco or Huanuco was founded in 1539, under the name of Leon of Guanuco, the first inhabitants being those who in the broils of the Pizarros and Amagros followed the royal party. It was formerly a considerable city, but is now, according to Alcedo, a mean village on the royal road of the Incas, with ruins of a royal palace and temple of the sun. The fruits are excellent, and the preserves much esteemed at Lima. The church, three convents, and the descendants of the conquerors are sunk into great poverty.

Commerce.

The commerce of Peru has been treated with great ability, and at considerable length, by Lequanda in the *Mercurio Peruano*, whence Estalla has borrowed most of his information on the recent state of this interesting country.* The nature of this work will only authorise a few extracts, in order to give a general idea of the subject. This commerce may be considered under three divisions, that by Cape Horn; that with the ports on the Pacific; and the interior trade with the southern provinces.

* Estalla, xx, 209—321.

The navigation by Cape Horn, formerly dreaded by the stoutest mariners, has become in the progress of navigation an object of little difficulty even to small vessels of the United States of America. Since the freedom of commerce in 1778 the principal trade of Peru has been conducted in this direction. This viceroyalty having no other resources but the mines, and a few natural products, (and having been besides deprived of many provinces, now united to the viceroyalty of La Plata, so that of seventy four only fifty-one remain,) the importations might rather have been expected to have decreased, yet the remaining provinces now consume a third part more than the whole viceroyalty, before the partition; though the length of the navigation from Europe greatly increases the freight, interest, and other expences of such a distant navigation. In order to give a general idea of the commerce of Peru with the parent country Lequanda selects five years, from 1785 to 1789, as he observes that the rebellion of Tupac Amaro, (of which little or nothing is known in Europe,) and the war with Great Britain disturbed the usual course of commerce, after the year 1779, in which the free system commenced.

State of the Importation of European Effects to Lima for five Years.

	Spanish produce.	Foreign produce.
1785 . . .	1,930,040- $\frac{1}{2}$. . .	3,106,056-2 $\frac{1}{2}$
1786 . . .	5,113,389-5 $\frac{1}{2}$. . .	6,358,901-5
1787 . . .	3,225,167-3 $\frac{1}{4}$. . .	2,426,581-6 $\frac{1}{2}$
1788 . . .	1,298,250-7 $\frac{1}{4}$. . .	995,055-6 $\frac{1}{4}$
1789 . . .	1,007,663-7 $\frac{1}{4}$. . .	1,216,855-3 $\frac{1}{4}$
By the registers	12,576,510-0 $\frac{1}{2}$. . .	14,103,450-7 $\frac{1}{4}$
Add 22 per cent	2,727,064-1 . . .	2,990,428-5
Total	15,303,574-1 $\frac{1}{2}$	17,093,879-4 $\frac{1}{4}$

SPANISH DOMINIONS.

COMMERCE.

	Price at Cadiz, &c.	Price at Lima.
1785 . . .	5,038,096-3 $\frac{1}{2}$	6,965,231-3 $\frac{1}{2}$
1786 . . .	11,472,221-2 $\frac{1}{2}$	14,734,084-4 $\frac{1}{2}$
1787 . . .	5,651,749-2	7,257,741-6 $\frac{1}{2}$
1788 . . .	2,293,306-5 $\frac{1}{2}$	2,940,992-7 $\frac{1}{2}$
1789 . . .	2,224,517-2 $\frac{1}{2}$	2,856,965-0 $\frac{1}{2}$
By the registers	26,679,960-7 $\frac{1}{2}$	34,755,015-7 $\frac{1}{2}$
Add 22 per cent	5,717,492-6	7,344,297-7
Total	32,397,453-5 $\frac{1}{2}$	42,099,313-6 $\frac{1}{2}$

The addition of 22 per cent. is on account of the price of silver at Cadiz. At the same time, there was a small casual trade with the Portuguese port of Macao in China. The state of the exportation for the same period will be found in the following table.

State of Peruvian Products sent to Spain by the Port of Callao or Bellavista.

	Gold and Silver in coin and bullion.	Other products.
1785 . . .	7,144,325-2 $\frac{1}{2}$	733,587-4
1786 . . .	8,285,659-7 $\frac{1}{2}$	882,807-1
1787 . . .	4,518,246-3 $\frac{1}{2}$	906,022
1788 . . .	5,463,973-1 $\frac{1}{2}$	579,160-2
1789 . . .	2,449,495-6 $\frac{1}{2}$	523,080
	27,861,700-4 $\frac{1}{2}$	3,624,656-7
	Price in Lima.	Price in Europe.
1785 . . .	7,877,912-6 $\frac{1}{2}$	8,823,115-6 $\frac{1}{2}$
1786 . . .	9,168,467-0 $\frac{1}{2}$	10,369,502-3 $\frac{1}{2}$
1787 . . .	5,424,268-3 $\frac{1}{2}$	6,503,961-2 $\frac{1}{2}$
1788 . . .	6,043,133-3 $\frac{1}{2}$	6,798,374-0 $\frac{1}{2}$
1789 . . .	2,972,575-6 $\frac{1}{2}$	3,484,386-2 $\frac{1}{2}$
	31,476,357-3 $\frac{1}{2}$	35,979,399-6 $\frac{1}{2}$

The

The balance of course was considerably against Peru; but the products might be considerably augmented if the Indians could be persuaded to abandon the ancient style of agriculture, which remains the same as it was 300 years ago. They are so easily fed and clothed, a little maize and some roots being the principal aliment, that it is difficult to find motives to influence their exertions; whence the Incas taxed them in one third of their produce, and the Spanish possessions according to our author suffer from the extreme lenity of the government. He recommends cotton as a great article of culture, and it is found wild in the vallies of the Montaña Real, a part recently explored to the E. of the provinces of Chacapoyas and Pastas S lat, 7°, on the river Gualaga, and the great Marañon, where cinnamon has also been found, though inferior to that of Ceylon. Of the common wool of Peru, one kind resembles that of the mountains of Leon, while another is little inferior to the celebrated *merina*; but the wool of the vicuña, and of the paco are peculiar products; the first, which exceeds all in fineness, is scarce, and will become still more rare by the destruction of the quadruped, which produces it, as his wool always costs him his life. The Incas, on the contrary, had tamed these precious animals; and it is truly surprising, that the Spaniards have neglected so beneficial an example. The Spanish ministry has indeed ordered the tributary Indians, who hunt the vicuñas to deliver their tribute in that wool alone, with a view to their preservation; but it seems doubtful whether the object will thus be obtained, though, upon this condition alone, all their other effects are exempted.

The wool of the paco or alpaco, though not so valuable in Europe, because its utility in certain cloths is unknown, is very useful among the Indians, in providing them with *pellones* a kind of coarse saddle cloths, with counterpanes for their beds, and other manufactures for warmth.*

Lint and flax abound in Chili and the isle of Chiloe, nor are they unknown in the vallies of Peru; but the Indians only gather the seeds to make a kind of beer which they call *cbica*, and the precious stems are left to perish, while they might become a precious article of export.

* Our author adds that this quadruped is easily domesticated. He does not mention the wool of the guanaco, which is exported from Buenos Ayres.

COMMERCE. The cacao tree is so abundant in the southern provinces of Peru, that no toil is required except to gather the fruit, which is sold at the meanest price. In the Montana Real, the cacao is esteemed superior even to that of Guayaquil and Caracas; but only a small quantity is brought, which is consumed by the rich people at Lima. The distance and difficulty of the roads from the government of Jaen, and the missions of Caxamarquilla, Chachapoyas, and Mojos, in which parts it is chiefly gathered, form an obstacle to the trade. There is also a kind of cochineal, called by the creols *tinte magno*, and pronounced by our author to be superior to that of Oaxaca, which is very abundant in some provinces, but only used by the Indians in their rustic manufactures. The coffee tree not only abounds in Guayaquil, but in the Lanas, Guanuco, and other mountainous parts, and although not so exquisite as that of Moca, is not inferior to that of Martinique. A new discovery in the Montana Real is cinnamon, which in strength exceeds that of Ceylon, but is not so valuable because it transudes a glutinous and disagreeable juice, a defect which may probably be removed by cultivation or industry. Father Girval, a celebrated missionary on the rivers Marañon and Manoa, mentions the great abundance of this precious tree, and proposes rules for its culture. The pimento or pepper is excessively strong, but not so pleasant as that of Asia. Many herbs, vulnerary and medicinal, also deserve attention; and among them are the *culen*, the *calagualla*, *conchallagua*, and others, of which there are only confused ideas in Europe. There are also many aromatic balsams, gums, and oils, distilled by the trees; and able botanists might in the Montana Real discover many new and wonderful kinds of trees and plants, useful for food or health. Trees and shrubs, which yield wax of seven different kinds, are known in the Montana Real, Chachapoyas, and Piura, not to mention Jaen, and Guayaquil, which belong to the viceroyalty of New Granada.* The beautiful furs which clothe many animals of the Montana Real might well excite the avarice of commerce; that of the *pinche*, an animal which dwells on the majestic river Marañon, is the most esteemed: his beautiful locks of a purple colour, fringed with speck of gold, while the rest

* Humboldt shewed at Paris a specimen of a kind of palm, about four inches in diameter, of which the supposed bark consisted entirely of wax.

of his body is harmoniously spotted with the same, and with green, yellow, and white, give this fur the greatest estimation. The capture of whales which abound on these coasts, might also be a lucrative article; and our patriotic author has even recommended the beautiful feathers which clothe the birds in the wide forests of the Montana Real, and which used to decorate the *collas* or queens of the Incas on solemn festivals, chiefly the *picaflor* or humming bird of Aymaraez. But the Montana Real, by our author's account, is a new world, or rather a newly discovered paradise. On the delicious shores of its majestic rivers, and amidst the perpetual verdure of its forests, there is no occasion to envy the Elysian fields. The novelty of its marvellous productions, though only a small part be yet explored, has confounded botanists and zoologists.

Lequanda also recommends the almonds of Chachapoyas, the amethysts of Pataz, otherwise called Caxamarquilla, the rock alum of several parts of the mountains, and the white amianthus of Guarochiroa and Canta, the copperas of Pataz, the silk webs spun by the spiders, and the large carmine spiders worn as ornaments by the women, the ginger of the Montana, the Prussian blue found in a mine of Chachapoyas, the asphalt of Yarijos, the balsam of copayba produced in the Montana, the cascarilla, the *culen* useful in indigestions, the *carana* for rheumatism, the copal gum, the *ceybo* which produces a vegetable wool, the oblong nutmeg also discovered in the Montana Real. He proceeds to give a state of the exports and imports from 1775 to 1779, and from 1785 to 1789; whence it appears they have nearly been doubled since the freedom of commerce was granted, though many rich provinces have been withdrawn from the viceroyalty. During sixteen years, in the time of the galleons, from 1714 to 1739, only thirty four millions were exported, while nearly thirty six millions appear in the accounts 1785—1789. It appears that a considerable trade is also carried on by the port of Arica, which supplies the markets of La Paz, Oruro, Chucuito, Puno, and other provinces of the viceroyalty of La Plata. Our author adds, that the value of most of the coinage enters into the royal treasury for duties, tenths, quicksilver, customs, royal monopolies, and other smaller branches. He recommends the port of Arica as

COMMERCE. the most convenient, while Arequipa might be an intermediate mart; but in this proposition he seems rather inclined to favour Peru at the expence of La Plata; nor is it probable, that the treasures of Potosi will again circumnavigate Cape Horn: but that European goods may be in a better condition when they arrive at Arica, than when they traverse in waggons the spacious inland provinces between Buenos Ayres and Peru, may seem probable. Articles that occupy much space without being of very high price, as the vicuna wool, copper, and the like, it might be indeed preferable to send by the port of Arica, or that of Bellavista.

Luxury of dress being the predominant passion in Peru, and chiefly at Lima, where the Spaniards and creols of all ranks go richly clothed, a chief article of imports is for this purpose. Silks, superfine cloths, fine linen, &c. form considerable articles: the Indians only use coarse linens, English coarse woollens, &c. Iron is indispensable in the mines and in agriculture. Most of the linens are from Brittany, with a few from other parts of France and Holland; the cottons, woollens, and silks are chiefly Spanish. There is an annual demand for 6000 hundred weight of rough iron, besides many articles of hardware. Mercury, wax, paper, pepper, saffron, medicines, liqueurs, books, glass, furniture, also form chief articles of import.

Lima carries on a considerable commerce with various ports already mentioned on the Pacific, both towards the S. and towards the N. The fertile and opulent kingdom of Chili supplies abundance of grain and dried fruits, and its cultivators regard the mines, though they produce more than 1,400,000 dollars of annual coinage, as only a secondary branch, when compared with the agriculture; that happy country uniting every possible advantage of nature; and the three havens of Valparaíso, Concepcion, and Coquimbo furnish convenient outlets for its opulence. The coasting vessels perform this voyage three times in the year, three months sufficing for each; while during three months they are moored in the road of Callao, which retains its name, though the city no longer exists, the dangerous shore being only graced with the village of Bellavista and Fort Fernando. Lima annually imports from Chili, vegetable products to the amount of more than 1,100,000 dollars, while Buenos Ayres is supposed to import

1,000,000

1,000,000 in coinage. Wheat forms the chief article sent by Chili to Peru; but slaves from Africa, salted meat, soap, wine, copper, dried fruits, saffron, &c. &c. also form considerable articles. The negroes are chiefly brought from the Rio Janeiro; the copper from Coquimbo; and the wine from Concepcion. The returns from Peru are in European goods, sugar, cloths of home manufacture, pita which yields a kind of flax, rice, chocolate, &c. but the balance is greatly in favour of Chili: and the sugar manufactures in the neighbourhood of Lima are on the decline, as it is found cheaper to bring it from Acapulco.

Guayaquil chiefly supplies excellent chocolate; and its forests present many solid, beautiful, and fragrant woods supplying luxuriant articles of furniture to Lima. The balance of trade is nearly equal. The port of Panama, having become a mere shadow of what it was, attracts little commerce from Peru; a few negroes are brought, but the traffic with the Portuguese at Buenos Ayres being found more convenient, has nearly terminated this branch. Some excellent chocolate continues to be imported; but the exports from Lima in home made cloths, and sugar, yield a considerable balance in favour of Lima. The trade with the ports of Sonfonate and Realejo, in Guatemala, is of little consequence, owing to the thin population of their vicinity: indigo, chocolate of Soconusco, and other trifles are repaid with Chilese wines, Peruvian cloths, &c. The imports from the isle of Chiloe consist chiefly in lumber, hams, and salted fish; while the return is in Spanish goods, liqueurs, soap, pepper, &c. The ports of the viceroyalty of Peru which are chiefly frequented are those of Arica, Ilo, Iquique, and Quilca. These are called *intermediate*, and belong to the Intendancy of Arequipa; and with Pisco in the district of Ica form the whole number in the viceroyalty to the south of Lima. Towards the north are those of Chancay, and Guacho* both in the province of Lima; Guanchaco, Pacasmayo, and Payta, in the Intendancy of Truxillo. With the southern ports the trade is in wine, brandy, iron, dried fruits, copper, tin, lead, &c. with the northern in wool, cotton, cordovan, rice, chocolate,

* The reader will remember that in the Peruvian language *g* is sounded *h*, whence the use of these two letters has become indifferent in the nomenclature of this country.

COMMERCE. salted fish : Lima chiefly carrying from the northern ports to the southern, and the contrary.

This account of the commerce of Peru, compiled by the able Lequanda from the most authentic documents, will it is hoped interest the English reader, not only from conveying a general idea of the commerce of the Spanish colonies, which had before been concealed with great jealousy ; but from the peculiar and remote situation of Peru, which, in spite of the diffusion of English navigation, has rendered her trade more obscure than that of any other country on the globe. No apology shall therefore be made for completing this little abstract, by a rapid glance on the inland commerce of this viceroyalty.

The chief markets or most populous towns are on the coast Piura, Lambayeque, Truxillo ; and, in the Sierra, Caxamarca ; the royal station of the mines of Chota : and towards the south Ica, Arequipa, and the royal station of Tarapaca ; and towards the interior Pasco, which is a mineral station belonging to the Intendancy of Tarma, Guanacha, Jauja, Guancavelica, Guamanga, and Cuzco. At these and other places, as Guarochiri, Caxatambo, &c. traders or agents sell for the merchants of Lima, European goods, liquors, and other articles sufficient for the consumption of the neighbourhood ; and the returns are generally in bullion or coin, but sometimes in eatables for the use of the capital : the trade may yearly amount to 1,500,000 dollars in products, while that in money and bullion may amount to 4,000,000.

Upon the whole, according to our author, the viceroyalty of Peru loses during five years on the balance of maritime commerce more than 6,500,000 ; but gains a balance with the viceroyalty of La Plata of nearly 1,200,000 annually : so that the amount being deducted the loss will be reduced to about 700,000 dollars, not to speak of the interior commerce, which cannot indeed enter into the account. This article shall be concluded with another general state of the coinage in America as given by Estalla.

		<i>Pesos fuertes</i> or Dollars.
Mexico	- -	24,000,000
Guatemala	- -	200,000
In North America		<u>24,200,000</u>

Lima

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			<i>Pesos fuertes</i> or Dollars.
Lima	-	-	6,000,000
Potosí	-	-	4,600,000
Santiago of Chili	-	-	1,200,000
Popayan	-	-	1,000,000
Santa Fé	-	-	1,200,000
In South America	-	-	14,000,000
In North America	-	-	24,200,000
In South America	-	-	14,000,000
Total in Spanish America			38,200,000

COMMERCE.

Natural
Geography.

Climate and
Seasons.

The singular form of this country occasions great peculiarities in the climate. The sublime cincture of mountains, extended on the western side of South America, occasions a division into three parts, of the maritime plains or vallies; the mountains themselves; and the high table land or upland plain, between the double ridge of the Andes.* Where theory would expect perpetual rain from the influence of the tropical sun, in the lower part of Peru, on the contrary, rain is almost unknown; nay it is asserted that in the part between 5° and 15° rain has never been known to fall. The chain of the Andes, of the medial height of 14,000 feet above the sea, arrests the clouds, except during the months of January, February, and March, when the summits are covered with snow. These clouds are supposed to have been carried by the east winds from the Atlantic, but incapable of passing this barrier, they dissolve on the mountains in rain and vapours, accompanied with lightning and tremendous thunder. In the provinces unvisited by rain the wind may be said to blow constantly from the south, along the course of the Andes, corresponding with our north wind which is generally dry; the cold of the antarctic pole being equal if not superior to that of the arctic. Vegetation is supported by liberal dews throughout

* The mountains of La Paz are probably the highest in the Andes. On approaching the coast at Arica, Frezier, l. 257, observed the mountain of Tacora, rearing its two summits into the clouds, being near the road towards La Paz.

NATURAL
GEOGRAPHY.

this region, computed at a length of 10° of latitude, or 600 g. miles; while the breadth may be twelve to fifteen leagues. Difference of climate depends as much on the elevation or depression of the country, as on zones, or latitude. While Choco is so inundated with rains as to be almost uninhabited, and the same inconvenience attends Panama, and many of the provinces of Guatemala, (an additional proof of the termination of the Andes,) Bouguer observes that from the gulph of Guayaquil to the desert of Atacama, a space of 400 leagues, rain is unknown; and the houses at Arica, like those at Lima, may be said to have no roofs, being only covered with mats, and a light sprinkling of ashes to absorb the dew of the night.

The high table land, that grand belt studded on both sides with the summits of the Andes, presents a more fertile aspect; and from its height of 10,000 feet above the sea enjoys a different climate. While the low lands are rather sandy and barren, except along the course of the rivers, the uplands may be said to enjoy a perpetual spring united with a perpetual autumn. The ferocious animals and serpents seek warmer regions, and do not incommode this earthly paradise; which however, as Providence generally balances advantages, stands on an insidious soil, an arch of no great solidity; while in the extensive and tremendous void beneath are stored instruments of sudden destruction, sulphur, subterranean fires, and waters, and all the terrible materials of earthquakes and volcanos.* The fields are perpetually verdant; all the grains, wheat in particular, wave in golden harvests; and the fruits of Europe blush amidst those of the torrid zone. An equal warmth, about 14° or 15° of the thermometer of Reaumur, diffuses health and vegetation; there is a perpetual equinox; and the temperature remains nearly the same, the seasons being only distinguished by the rains which fall from November to May, as in the eastern forests that skirt the Andes. The height of the mountains, it may be conceived, invests them with perpetual winter; and the intense cold which is felt on the Paramos or highest deserts, and which is described as being of a peculiar kind, may

* This description chiefly refers to Quito in the viceroyalty of New Granada. Though the table land continues the same, there does not appear to be any active volcano in the viceroyalty of Peru.

probably

probably in part proceeds from the salts with which the soil is impregnated, the nitre appearing like a light flour on the streets and highways, according to the observation of Bouguer ;* who has not however drawn a striking inference, which is submitted to more experienced naturalists. May not this extreme cold, arising from an accidental cause, affect the instruments employed and the observations, and have thus led to a conclusion that the Andes are of greater height than they would otherwise be estimated ? As artificial ice may be produced by nitre, it is not inconceivable that vast masses of that substance may affect even the grand appearances of nature.

NATURAL
GEOGRAPHY.

The immense forests which clothe the maritime plains indicate that the population has always been scanty ; while theorists have, in like manner, ascribed an infinite population to ancient Germany and Scandinavia, countries overshadowed with thick forests : which is a mere contradiction in terms. These forests have their peculiar aspect, consisting of acacias, mangle trees which spread their fantastic stems and roots along the ocean ; brooms and ferns in prodigious variety, with tall aloes, and other succulent plants. The *ferula* or gigantic fennel grows to a surprising size, and affords a wood four or five times lighter than the lightest pine, and yet of considerable strength. Cedars of two or three kinds, cotton trees, many sorts of ebony, and other woods, alike precious by their smell, and by the perfect polish they assume under the hand of the artizan. The tallest tree is the *maria* which is used for masts ; and of the palm there are ten or twelve kinds growing like enormous plants, while their broad leaves only decorate their summits. Most of the trees spread their roots along the surface, but those of the palms often rise into the air more than six or seven feet, forming a vegetable pyramid. At the distance of seven or eight leagues from the coast the trees increase in size, are often clothed with parasitical plants, and attached by enormous creepers, while the voids are filled with thorny brambles sometimes from twenty to thirty feet in height. On passing the first chain of the Andes, which at a distance threatens to prohibit the industry or even existence of man, the traveller is surprised

Face of the
country.

* Figure de la Terre, p. lxiv.

with

probably

FACE OF THE
COUNTRY.

with the new region before described, and finds the face of the country as different as the climate.

Botany.

The botany of the Spanish territories east of the Andes is as yet wholly unknown to European science, it is only therefore from analogy that we imagine the vegetables of these extensive countries to resemble those which are natives of Guiana and Brazil. For the indigenous plants of Peru and Chili, our only authority is the *Flora Peruviana et Chilensis* of Ruis and Pavon, and of this work, not more than a fourth part is as yet published. We know, from the reports of navigators and occasional travellers, that the vicinity of the coast produces many of the tropical fruits and vegetables, such as the cabbage palm, the cocoa-nut, the chocolate-nut, the cotton shrub, the pine apple, the canna, amomum, turmeric, plantain, and sugar-cane. But in the more temperate climate of the high plains, and upon the sides of the Andes, it is natural to expect plants of a hardier constitution. Perhaps the best known and most generally interesting of the trees are the several species of cinchona, from two of which, at least that valuable medicine the Peruvian or Jesuits bark is procured. The cardana alliolora is a large timber tree, remarkable for the strong smell of garlic emitted from the leaves and fresh wood. A kind of coffee, the coffea racemosa, is met with in the mountainous groves of the interior, whose berries are applied to the same use as the cultivated species. The large flowered jessamine and datura arborea diffuse their evening fragrance round the neighbourhood of Lima, and braided in the hair of the women give and receive a reciprocal charm. No less than twenty-four species of pepper, and five or six of capsicum, are reckoned among the Peruvian natives, besides several esculent kinds of solanum, of which the S. lyco-perficon or love-apple, and S. tuberosum or potato, are the best known and most esteemed. The tobacco and jalap abound in the groves at the feet of the Andes, and many of the ornamental flowers of our English gardens and green houses, such as the singular and beautiful calceolaria, the resplendent salvia longiflora, the graceful tropæolum or nasturtium, and the simple nolana prostrata, are indebted to these countries for their origin.

The botanical products of Peru have already been partly enumerated in describing the commerce of the country. In describing the province of Piura Estalla enumerates the cedar, the box, the olive, the wild

orange, the incorruptible algorob, the palm, the willow, the guayacan, BOTANY.
 whose wood is hard and odorous; and many other kinds, which having
 only Peruvian appellations a dry recapitulation would little instruct the
 reader. The medical tamarind also abounds; and our author adds that
 drink preserved in vases made of its wood will cure the dropfy! Many
 similar passages, from Gumilla's description of the river Orinoco down
 to the most recent Spanish authors, seem to evince that the state of
 medicine in Spain must be deplorable, and likewise the state of
 education in the universities truly Aristotelean and scholastic. The
 quinaquina or cascarilla, an aromatic bark recommended in febrile and
 hypochondriac cases, is produced in abundance in the Montana Real;
 the wood is also solid and excellent. The quina or jesuit's bark chiefly
 abounds in Quito, but is also found in some provinces of the Peruvian
 viceroyalty, particularly Piura: the zapote, *achras sepote*, supplies by its
 leaves abundant food for cattle. For ample details the reader may be
 referred to the *Flora Peruvienfis*.*

The zoology of Peru is little different from that of La Plata. Zoology:
 The animals called the American lion and tiger, the cougar [*puma*] and jaguar
 of Buffon are not unknown, the latter being often of great size and
 strength. The theoretic and systematic dispositions of the French natu-
 ralist have led him to singular reveries concerning the diminutive size of
 the American animals, which have been abundantly confuted by writers
 of more experience and observation. And while the Tehuels or Pata-
 gons exceed in stature and strength any inhabitants of the ancient con-
 tinents, the quadrupeds will also be found rarely to yield in size. The
 mountain cat abounds in the forests, always hunting in the night, while
 its eyes shine like fire, and will even attack men unawares. A kind of
 deer called *venados* abounds in the northern provinces, and the skin has
 become, at Lambayeque and Piura, a new article of commerce, being
 found excellent for shoes. There are several small animals resembling
 foxes, and having the same propensities; one kind is called *bedionda*, be-
 cause, when chased, by shaking itself it diffuses so nauseous a smell, that
 the hunter is forced to flee with great trepidation. The most ferocious
 bears are those of Piura. The *cui* is a kind of rabbit. The *tejon* seems

* The majestic sun flower is a native of Peru.

between

ZOOLOGY. between a dog and a wolf, and is destructive to the sugar canes. There is a sea fowl, with feathers on the body, while the bare wings resemble those of the bat. The beautiful flamingo frequents the lakes; and the brilliant plumes of the royal goose do not save it from destruction, the flesh being exquisite, as is that of the bandurria, another aquatic fowl. The camanay is sold in the markets; and our author adds, that of the bones, which are bluish, there is an equal consupt. Of the fish the *peje sapo* is the most esteemed.*

The animal called the *danta* or *gran bestia* [tapir] is known in Jaen and Caxamarca, and somewhat resembles a cow, though seldom larger than an ass. On his front is a firm horn or bone with which he opens his way among the underwood. The ant bear is another singular animal. The silk-weaving spider abounds in Jaen, and Chachapoyas, in which last province they are as large as crabs, and the teeth larger than those of a great rat. † Nor must it be forgotten that, in the newly discovered regions of the Montana Real, there is a beautiful bird called the Carbuncle, about half a yard in height, of most exquisite plumage, while the breast is beautifully spotted. The Piras, a tribe among whom it is found, call this grand bird the *inocoy*. ‡

MINERALOGY. Though the mineralogy of the Peruvian viceroyalty has suffered a considerable diminution, by the annexation of Potosi and the southern provinces to the viceroyalty of La Plata; yet the amount of the coinage of Lima, which continues to exceed that of Potosi, may evince the great opulence that remains. From the extreme province of Piura in the north, to that of Canes and Canches in the south, gold and silver follow the grand chain of the Andes. In Piura muriate of copper has been found in Hayabaca; and sixteen leagues from the town of Piura, at a village called Amatape, is a celebrated mine of pitch or bitumen, which supplied the viceroyalty for many years, the quintal being sold from thirty-five to forty dollars; but another mine having been discovered at the point of St. Helena, in the jurisdiction of Guayaquil, the former is less frequented.

But to enumerate the mineral products of the several districts would be infinite; and the following account of the chief mines, extracted

* Estalla, xxiii. 40.

† lb. xvi. 25.

‡ lb. 208.

from the *Mercurio Peruano*, is not only curious in itself, but presents the names of the new Intendancies, the most modern division of the viceroyalty. MINERALOGY.

"In the Intendancy of *Lima*, with its dependancy of *Guarochiri*, there are four mines of gold; one hundred and thirty-one of silver; one of quicksilver; and four of copper; all of which were worked in 1791, when this enumeration was taken. Seventy silver mines had then, for various reasons, been abandoned.

"In the Intendancy of *Tarma*, with its dependancies of *Pasco* and *Huallanca*, two hundred and twenty-seven mines of silver were wrought, and twenty-one were in a neglected state. There were, besides two lead mines, which yielded an abundant supply of that metal.

"In the Intendancy of *Truxillo*, with its dependancy of *Chota*, of three gold mines two were worked; one hundred and thirty-four silver mines were also worked; and no less than one hundred and sixty-one abandoned.

"In the Intendancy of *Guamanga*, with its dependancy of *Lucanos*, sixty mines of gold, one hundred and two of silver, and one of quicksilver, were wrought. Of the first of these metals, three mines had been abandoned, and of the second, sixty-three.

"In the Intendancy of *Cuzco*, with its dependancy of *Curahuasi*, the only mines which had been discovered at that time were of silver. They were nineteen in number, and were all of them successfully wrought.

"In the Intendancy of *Arequipa*, with its dependancy of *Cailloma*, one mine of gold, and seventy-one of silver were wrought. Of the former metal four mines had been abandoned; and of the latter twenty-eight.

"In the Intendancy of *Guantajaya*, with its dependancy of *Tacna*, one mine of gold, and twenty of silver, were wrought; at the same time that no less a number than nineteen of the former metal had been abandoned. Thirty mines of silver were in the latter state.

"In the Intendancy of *Guanacavelica*, with its dependancies of *Castrovireyna* and *Lircay*, one mine of gold, eighty of silver, two of quicksilver, and ten of lead, were worked. Two of gold, and two hundred and fifteen of silver were in an abandoned state. The multiplicity of unserviceable silver mines may be accounted for by the abundance of water, in the

districts

MINERALOGY.

districts in which they are situated, having gained on them from time to time, so as at length to have choaked them completely.

"From the above statement it results, that in the eight Intendancies into which the viceroyalty of Peru is divided, there were, in the year 1791, sixty-nine serviceable mines of gold, seven hundred and eighty-four of silver, four of quicksilver, four of copper, and twelve of lead; at the same time that twenty-nine gold, and five hundred and eighty-eight silver mines had, by various accidents and casualties, been rendered unserviceable.

"During a space of ten years, from the commencement of 1780 to the end of 1789, the above mines yielded thirty-five thousand three hundred and fifty-nine marks of gold, twenty-two carats fine; and three millions, seven hundred and thirty-nine thousand, seven hundred and sixty-three marks of silver.* In the year 1790, the silver mines yielded four hundred and twelve thousand, one hundred and seventeen marks of that metal; being an excess of thirty-eight thousand, one hundred and forty-seven marks, over the average produce of the ten antecedent years.

"It would appear that the mines of Mexico are much more productive than those of Peru: since in the above year of 1790, which was far from being reckoned one of the best, five thousand and twenty-four marks of gold, and two millions, one hundred and seventy-nine thousand, four hundred and fifty-five marks of silver, the produce of the mines, were coined in the Royal Mint of Mexico. The proportion of silver was consequently in the ratio of more than five to one greater than that afforded by the Peruvian mines."†

Among

* The mark of gold being estimated at a hundred and twenty-five piastres, and that of silver at eight piastres, the total amount, in sterling money, of the produce of the mines, during the above ten years, will be found to have been 7,703,545l.

† Coleti has given the following list of the mountains in Peru; but several are now in the viceroyalty of La Plata.

Abitania
Acacuna
Acochala, *Mine of Silver*
Ananea, *Gold*
Andi
Aporoma, *Gold*
Arauro, *Gold*

Arcota, *Silver*
Arirahua, *Gold*
Aupillan, *Iron*
Cara-huagra, *Silver*
Carangas, *Silver*
Chocaya, *Silver*
Chumbilla, *Silver*

Among the mines of Peru the most celebrated seem to be those of ^{MINERALOGY.} Cailloma, Pasco, Piedra-Parada, Chota. Those of Pasco or Lauricocha were discovered in 1630 by a shepherd, who having lighted a fire was surprised at the melting of the silver. In 1785 the royal chest of Jauja was united to that of Pasco. The ore is generally of a yellowish colour with reddish spots; and a bed called the Royal Mantle stretches over more than a league and a half in circumference. In 1789 about a hundred and twenty thousand marks of silver were refined in the royal foundry of Pasco. To the west the mountain of Raco is said to be composed of white granite, which on being thrown into water changes its colour to a dusky blue; whence it is called fly's wing, and is used in building.

The celebrated mine of Guantajaya or Huantajaya, in the neighbourhood of Tacna, in the province of Arica, is a recent discovery. It is singularly situated in a sandy plain, at a considerable distance from the mountains; and some of the veins so rich as to be cut with a chisel. *

The quicksilver mine of Guancavelica was formerly highly celebrated, but appears to be nearly exhausted, after having during two centuries produced mercury to the value of more than 67,000,000 dollars. †

Chondoroma, *Silver*
Huantajaya, *Silver* (a plain)
Huatiapa, *Copper*
Huayna-putina, *A volcano*
Julcamarca, *Gold*
Laicacota, *Silver*
Omate, *A volcano*
Oruro, *Silver*
Papo, *Silver*

Porco, *Silver*
Poto, *Gold*
Potosi, *Silver*
Sahuancuca, or Ambato,
a volcano
Santa Giovanna, *Silver*
Sunchuli, *Gold*
Tampaya, *Silver*
Ucuntaya, *Silver*.

Among the mountains of Peru are mentioned Vilcanota, Illimani, Condoroma, Tacora. The volcanos of Quinistatac and Cheké-Putina seem to be active. It was from Illimani, a mountain of the first magnitude, that a vast fragment fell, and was found so full of gold that it was sold in the neighbouring city of La Paz at half price. *Merc. Per.*

* Estalla, xxvii. 307.

† Estalla, xx. 365, says that a rich mine of mercury was lately discovered in the hill called Chonta, district of Huamali. At Lancilan is found the noted stone *catachi*, a petrification, in beautiful white columns.

MINERALOGY.

The other mineralogic products of Peru are numerous. Basalt of a brown colour, in beautiful square columns, is found on the heights of St. Jeronimo, and in that of the Amacaes of Lima. The stone of the Incas is found in various parts of the Andes, being a compact marcasite capable of a high polish. The *piedra del galinazo*, or obsidian, is a volcanic product; and receives its name from the black colour resembling that of the Peruvian crow, which is only remarkable as having no feathers on the head. Rock salt is found of various colours, but is only used for the cattle in the mountains, while it might become a precious manufacture. In the province of Caxamarquilla, at the port of Callamar on the river Lauricocha, or jesuitic Maranon, are found curious stones of various colours. A stone which yields a paint of mulberry colour is found in the province of Ica. *

The whole country of Peru may be said to be one natural curiosity. The Andes themselves, the intermediate plain, teem with the most sublime and surprising objects in nature. It is probable that the rupture of the genuine Maranon, falsely called the Ucaial, through the Andes, presents a spectacle of singular grandeur; and the newly explored region called

* Helms has observed that the gold and other metals are chiefly found in secondary mountains; yet sulphurated silver ores occur in mountains of granite, gneiss, and slate. At Guancavelica a vein of cinnabar, eighty yards thick, is accompanied with galena, manganese, and arsenic. Behind Guancavelica, the argillite graduates into calcareous sandstone, as does this into simple limestone; all equally rich in gold, silver, and mercury. In Lauricocha, near Pasco, a belly of porous brown ironstone is found, half a mile long, and 15 fathom in thickness, containing native silver thinly dispersed through it. But in the midst of it there runs a vein of white argil, in which the silver abounds. Near Cordova, in La Plata, some veins of copper ore are found in mountains of red and grey granite. In primeval blue argillite, of which the Andes principally consist, copper ores occur, together with those of gold, silver, and galena, and the sparry iron ore in veins. The famous argentiferous coniform mountain of Potosi, which is twenty-eight miles in circumference, consists of yellow hard argillite. At La Paz, the highest point of the Andes, there is an auriferous conglomeration of yellow clay and rounded flints, in a fragment of which, that had lately fallen down, lumps of gold, weighing from two to twenty pounds were found, and some of an ounce weight are still discovered. In conglomerations of marl, gypsum, limestone, and fragments of porphyry, native gold, and silver ores abound in the stratified mountains of Cuzco; also native silver, and compact ores of copper and lead.

Negroes

called Montana Real has astonished the missionaries by the peculiarity of its productions. *

MINERALOGY.

Negroes are wholly unfit for the labour of the mines, as they cannot bear the excessive cold. The Indians are therefore indispensable. The new grand mine of Guantajaya is in the district of Tarapaca, in the Intendancy of Arequipa; from which it is distant eighty leagues, from Lima three hundred, from the port of Iquique nearly two leagues. *Merc. Per.*

* Among the natural curiosities of Peru must not be forgotten a very singular production of a kind of silk-worm. This caterpillar feeds on the *pacas*, or *mimosa inga*, a common tree in Peru. Instead of forming separate webs, they unite when they are satiated on a broad branch, or the trunk, where they form a regular and beautiful web, of a size proportioned to their number. Having completed this cloth, which has great lustre, and such consistency that it is scarcely capable of decomposition, they arrange themselves in files, so as to form in the centre a perfect square, where each makes its cocoon of a coarse short silk, and becomes a chrysalis before it transmigrate into a moth. Pineda, an eminent mineralogist in Peru, sent to the Royal Cabinet at Madrid a piece of this natural silk paper, about a yard and a half in length, the common form being elliptical.

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Negroes

CHAPTER III.

VICEROYALTY OF NEW GRANADA.

Extent.—Provinces.—History.—Government.—Population.—Revenue.—Cities and Towns.—Commerce.—Natural Geography.—Mines of Emeralds.—Natural Curiosities.—SUPPLEMENT, Government of CARACAS.

EXTENT.

THIS viceroyalty extends from the river Tumbez to the Caribbean sea; that is from S. lat. $3^{\circ} 30'$ to N. lat. 12° , being fifteen degrees and a half, or 930 g. miles. The medial breadth may be assumed at four degrees, or 240 g. miles. The provinces forming the government of Caracas, namely Maracaibo, Venezuela, Varinas, Cumana, and Spanish Guiana, shall be briefly described in a supplement to this chapter. This grand viceroyalty, though it dates from 1718, was, after a long suppression only finally established in 1740. As the kingdom of Quito was annexed to this viceroyalty in 1718, and at no period formed a part of Peru, it is evident, that the French and Spanish astronomers, who went in 1735 to measure a degree under the equator, have fallen into a singular mistake in geography, when they speak of their voyages to Peru: and the term would only have been just if they had visited the high table land and the summits around La Paz, indicated by Helms as the highest in the Andes. But even at present the most eminent astronomers and naturalists, too often shew their total unacquaintance with the first principles of geography.

PROVINCES.

The grand and opulent viceroyalty of New Granada, sometimes called from the capital that of Santa Fé, contains the following provinces.

I. *Jean*

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|------------------------------|---|------------|
| 1 <i>Jaen de Bracamoros.</i> | 14 <i>Antioquia.</i> | PROVINCES. |
| 2 <i>Loja.</i> | 15 <i>Santa Fe.</i> | |
| 3 <i>Cuenca.</i> | 16 <i>San Juan de los Llanos.</i> | |
| 4 <i>Macas.</i> | 17 <i>Merida.</i> | |
| 5 <i>Riobamba.</i> | 18 <i>Santa Marta.</i> | |
| 6 <i>Guayaquil.</i> | 19 <i>Cartagena.</i> | |
| 7 <i>Quito.</i> | 20 <i>Zinu.</i> | |
| 8 <i>Tacames.</i> | 21 <i>Cboco.</i> | |
| 9 <i>Paños.</i> | The <i>Tierra Firme</i> , comprising | |
| 10 <i>Barbacoas.</i> | three districts. | |
| 11 <i>Popayan.</i> | 22 <i>Darien.</i> | |
| 12 <i>Raposo.</i> | 23 <i>Panama</i> , or <i>Tierra Firme</i> proper. | |
| 13 <i>Novita.</i> | 24 <i>Veragua.*</i> | |

The

* In the appendix to his last volume, Alcedo has given the following statement of the divisions of this viceroyalty. They are erroneous, as usual, with that author.

Gobiernos.

- | | |
|---------------------|---------------------------------|
| <i>Cartagena.</i> | <i>Antioquia.</i> |
| <i>Caracas.</i> | <i>San Faustino (Merida).</i> |
| <i>Popayan.</i> | <i>San Juan de los Llanos.</i> |
| <i>Maracaibo.</i> | <i>San Juan Jiren (a town).</i> |
| <i>Guayana.</i> | <i>Mariquita (a town).</i> |
| <i>Cumana.</i> | <i>Isla de Puertorico.</i> |
| <i>Santa Marta.</i> | <i>Isla de la Margarita.</i> |
| <i>Choco.</i> | <i>Isla de la Trinidad.</i> |

Corregimientos.

- | | |
|-------------------|------------------|
| <i>Tunja.</i> | <i>Duitama.</i> |
| <i>Bogota.</i> | <i>Chivata.</i> |
| <i>Boza.</i> | <i>Paipa.</i> |
| <i>Pasca.</i> | <i>Sogamoso.</i> |
| <i>Pancho.</i> | <i>Neiva.</i> |
| <i>Guatavita.</i> | <i>Gameza.</i> |
| <i>Zipaquira.</i> | <i>Chita.</i> |
| <i>Ubate.</i> | <i>Sachica.</i> |
| <i>Coyaima.</i> | <i>Velez.</i> |
| <i>Muzo.</i> | <i>San Gil.</i> |
| <i>Turmeque.</i> | <i>Servita.</i> |
| <i>Tenfa.</i> | |

Kingdom

PROVINCES. The province of Jaen de Bracamoros is the most southern of the viceroyalty, and was subdued by order of Pizarro about 1534. The gold is found in the mountains, while the plains produce cotton, excellent chocolate and tobacco. The district of Cuenca, situated on the table land of Quito, is of benign temperature, producing abundance of cattle, sugar, cotton, and grain, and has considerable manufactures of cotton cloths. The terrible earthquake of 1797, which totally ruined the city of Riobamba, so that of 9000 souls only about 400 escaped, seems not to have extended so far south as Cuenca. Macas is a considerable province on the eastern side of the Andes, whence the difference of its seasons. Though within two degrees S. lat. of the equator, the winter begins in April, and lasts till September, being the season of spring on the table land. The climate is warm and moist; the chief product tobacco, with some sugar and cotton; and the cinnamon is said to excel that of Quixos on the north.* Guayaquil is a celebrated commercial province: and the scientific reader is familiar with Quito, the scene of grand astronomical observations. The central provinces will be sufficiently illustrated in the general description. That of San Juan de los Llanos forms a considerable excrescence to the east, if extended as

Kingdom of Tierra Firme.

<i>Gobiernos.</i>	Panama.
	Portovelo.
	Veragua.
	Darien.
<i>Alcaldia mayor.</i>	Nata.

The incorrecness of this list, published in 1789, is truly surprising. In like manner he gives the divisions of the Spanish possessions in North America, and divides the viceroyalty of New Spain into three kingdoms, New Spain, Mechoacan, and New Galicia; forgetting New Biscay, and many important provinces in the north. With pain be it observed, that this useful work is often disfigured with the grossest errors, so as frequently not only to confound the ancient and modern divisions, and the longitudes and latitudes, but even the common points of the compass, which are sometimes entirely reversed!

Estalla, xxii. 274. says that the provinces (of Santa Fe *proper*) are Bogota, Velez, Pamplona, Grita, Merida, Muzo, Ebate, Pancher, Neiba, Marquetones, Sutagaos, Ibague, Tenza, Lengupa, Sogamoso, and Chita; the villages being 301, and the Indian inhabitants of these villages only 18,359.

* What Alcedo means by mines of copal cannot be conceived. Copal is a gum. He perhaps uses the word metaphorically.

far as the Orinoco; but as the capital town is on the western skirts, the extension given by La Cruz seems very arbitrary, there being no Spanish settlements in that direction. Of the extreme provinces on the north, Veragua, though politically annexed to Tierra Firmé, geographically belongs to North America, as allowed by all the Spanish authors. The name of Tierra Firmé Proper, given to Panama, is a term adopted for the narrowest part of the American isthmus, to denote that, however narrow, it was firm land, or belonged to the continent; or rather because the name was applied indifferently to this and the adjacent province of Veragua, assigned as a dukedom to Colon,* and were discovered by that great man to be certainly continental, when he explored the harbour of Portobello, on his fourth voyage 1502. The province of Darien is extended on both sides of the gulph so called; and from the proximity of the city of Panama, and a considerable coast on that bay, reaches as far as the district of Zinu, with a length of shore on the Caribbean sea. The ruins of New Edinburgh are marked by La Cruz considerably to the west of the gulph of Darien, a feeble memorial of the Scottish settlement.† This province, the largest of those in the Tierra Firmé, is about 260 B. miles in length, by about 80 miles in medial breadth: but is singularly unhealthy on account of the perpetual rains, and Portobello, though an advantageous situation, is nearly ruined; nor have the Spaniards, though ready to avail themselves of advantages, been able to form any establishments either on the gulph of Darien on the Caribbean sea, or that of San Miguel, on the Pacific. On the contrary, all the stations have been obliged to be withdrawn, except a little fort which protects the gold mine of Cana, on the frontiers of Choco; and the little garrison which comes from Panama, is changed every month. The only products were some cotton and tobacco. The savages of Darien are singularly wild and ferocious. In 1786 the viceroy of New Granada sent an expedition against them, but the Spanish troops could not bear the climate. The

* The use of the Latin term *Columbus* sometimes even becomes ridiculous. Dr. Robertson has Don Diego and Don Hernando *Columbus*, thus uniting Spanish and Latin. He might as well have said Sir Francis *Drakius*. This affectation even goes so far, that a recent geographer has put *Vesputius Americanus* for Amerigo Vespucci!

† The *Puerto Escondido* is also called *Escozes*; and there is a cape called *Caledonia*.

PROVINCES. Indians are supposed to amount to 30,000 souls, without chiefs, and acknowledging no authority, so that it is impossible even to form a lasting treaty.

History.

The ample provinces which form this viceroyalty were chiefly discovered by Quesada, and the kingdom of New Granada was at first governed by the Royal Audience, founded in 1547; and by its president the captain-general *. This arrangement was changed in 1718, when the viceroyalty was erected; but it was suppressed in 1724, and only finally established in 1740. When the conquerors entered there were elective princes in Bogota and Tunja, the former being styled *xipa*, the latter *xaqui* or sachem; and the country was more populous than the generality of the native states. At present the want of population is regretted, as hands alone are wanting to render this viceroyalty one of the richest

Government.

in America. The government is similar to that of the other viceroyalties; with a Royal Audience at Santa Fé the capital, a tribunal of accounts, a treasury, and royal mint. The Royal Audience is not divided, but sits in the same hall for civil and criminal cases; there being five judges, a fiscal, a protector of the Indians, and other officers. The governments comprehended in the Royal Audience, are Carthagena, Panama, Santa Marta, Maracaibo, and Portobello, with the district of the river Hacha: in the interior are Antioquia, Choco, Veragua, Mariquita, Giron, Neiva, and the Llanos.† There is also a Royal Audience at Quito; and a governor and president, who rules the southern provinces in subordination to the viceroy of New Granada. But Quito remains a bishopric, while Santa Fé is an archbishopric, founded in 1562, with Popayan and Carthagena as suffragans.‡ In 1783 the archbishop was named viceroy, an example of great novelty, and which proved little beneficial to the country. There are also several missions in the country called Los Llanos, and on the Apuri, Meta, and Casanari, with some little villages or stations. Those on the upper and lower Orinoco, and river Negro, assigned to the capuchins in 1769, belong to the government of Caracas.

Population.

The population of this viceroyalty has no where been precisely estimated, but is insinuated, as already seen, to be more scanty than that

* Estalla, xxii. 274.

† Ib. xxii. 286.

‡ There were afterwards added the bishops of Caracas, Panama, Santa Marta, and Merida.

of the others. In his description of the kingdom of Quito, Alcedo has said that it contains 552,800 catholic inhabitants, not to mention the incredible number of savages; but his accuracy is far from being infallible, and he often copies ancient accounts, in which the ideas concerning population are extremely erroneous. Yet while the general population of Caracas amounts to 728,000, it is probable that rather more than one million may be allowed for that of this viceroyalty.

The revenues yielded by this province are also left in obscurity. By the account of Estalla, there is annually coined at

Santa Fé to the value of	1,200,000	dollars.
Popayan	1,000,000.	
	2,200,000	

being not more than one half of the product of the mint of Potosi, and little more than one-third of that at Lima. Of this the king's tenth will be 220,000 pounds, which is probably consumed in the expences of the government. Further lights on the revenue will arise from the article of commerce.*

The state of the military force in the viceroyalty of Santa Fé has not been illustrated, but it is probably inconsiderable; and it would be difficult in such distant provinces to aggregate an effective force of five or six thousand.

The capital city is Santa Fé de Bogota, or as often styled Bogota, in a situation sufficiently central, near the river Funza, which at the distance of thirty-five B. miles, falls into the great river Magdalena.† It was founded

POPULATION.

Cities.
Bogota.

* Recapitulation in dollars, of the gold and silver arrived at Cadiz from the Spanish ports in America, from the peace of Amiens to this day, 3 Ventose, in the 11th year of the French republic, Namely,

From Lima, 1,626,727; Veracruz, 21,386,001; Montevideo, 11,987,949; Havana, 8,761,288; Carthagen, 3,031,780; Porto Rico, 16,744; Campeche, 4,860; Maracaibo, 6,397; Portobello, 9,000; Guayra, 18,234.

Total, 46,842,980. Fr. Journals.

† La Cruz calls this river Pati: Alcedo, *voce* Pati, says it passes by this capital; and, under Funza refers to the article "Bogota River," whence it appears that Funza is the Indian name for that stream.

CITIES.

founded in 1538 by Quesada the conqueror. Though at a considerable distance to the east of the grand chain of the Andes, which passes north to the province of Carthagena, between the rivers Magdalena and Cauca; and though only four degrees from the equator, in the heart of the torrid zone of the ancients; the climate is unexpectedly rather cold. It stands in a beautiful and spacious plain called Alcarazes, and the soil is sufficiently fertile, being protected by another high ridge of mountains on the east, branching off towards the province of Santa Marta. It is a large and handsome city, the streets being broad and well laid out. There are four squares and five bridges over two little rivulets, called San Francisco and San Augustin, whose clear, fresh, and healthy waters, spring from the eastern mountains; and running west bathe the city and its plain, which is about twenty leagues in length, and eleven in breadth, till they join the Funza, which passes at the distance of a quarter of a league, and is also called the river of Bogota.* The heat of the latitude being tempered by the situation, all the year may be called a perpetual spring, with such abundance of produce that there are two harvests; that called *yearly* is sown in the end of February, and gathered

As it is not a little remarkable that the topography of this celebrated capital should remain so obscure, the articles on the rivers shall be translated from Alcedo.

"PATI, a river of the province of Bogota, in the new kingdom of Granada. It rises in the lake Guatavita, and, forming as it were a circle, passes by Santa Fé, at its entrance into the river Magdalena."

"BOGOTA, a considerable river of the new kingdom of Granada. It rises not far from Santa Fé in the *Paramo*, or desert of Albarracin, betwixt this city and that of Tunja, towards the west (read east, but this is a very common error of Alcedo, who sometimes puts N. W. for S. E.), and after having watered a spacious plain, precipitates itself from a formidable cataract, called that of Tequendama. It traverses the province to which it gives name, and that of Panches, where it is called by the Indians Funzha, and soon after falls into the river Magdalena."

To this account of the river it may be added, that the river Pati is unknown to Coletti, who is often copied by Alcedo. The account of the original village of Bogota may not be uninteresting.

"BOGOTA, a village and capital of the district of that name, which is also called Sabana, in the new kingdom of Granada, situated in a beautiful and pleasant plain, on the banks of a river of the same name, abounding in fish, especially that called the captain, which is excellent. It is in a cool climate, abounding in the grain and products of that part of the world. It was anciently a large and opulent town, the seat of the court of the kings or *zipas*, but now reduced to a miserable village, yet its jurisdiction comprehends seven other villages. It is two leagues to the west of Santa Fé."

* Estalla, xxii. 279. Coletti in 1702.

in July; while the *half-yearly* is sown in September and gathered in January. The usual wind is the south, here called *ubaque*, from the name of a village on a mountain in that situation; and though on the north of the equator it is subtil and cold, like the winds from that quarter in South America; while, on the contrary, the north wind is cloudy, humid, and tempestuous.*

The cathedral is magnificent, with sixteen prebends. There are also three parish churches, and eight convents, with four nunneries, and the great hospital of San Pedro. Besides two religious colleges for education, there is the university of St. Thomas, with a great public library, established in 1772. This beautiful city, rarely visited by travellers, also presents several other churches and chapels. The population is thought to exceed 30,000 souls; the inhabitants being generally of a good character, and though of a phlegmatic appearance, of acute wit, and often with an agreeable stature and aspect. There are among them many distinguished families, descended from the conquerors, and from the first houses in Spain.†

Justice is administered by two alcalds elected by the cabildo, according to the code of the Indies, with an appeal to the Royal Audience. The *Ayuntamiento* or municipality is composed besides of six regidores, and other officers. The municipality also proposes to the government persons to be nominated alcalds of the villages, whose jurisdiction in criminal affairs is limited to the apprehension of the guilty, and their remission to the legal courts; the same plan being observed in the other cities of this Audience.

In general the inhabitants of Bogota are not rich, and there are rarely to be found, as in other countries, subjects capable of great disbursements on

* Estalla observes, that the streets are twelve varas or yards in breadth; and the city is in length 25 *manzanas* or *quadras*, and twelve in breadth. The quadra he often uses in describing the size of cities, yet I cannot find an explanation.

Ulloa, i. 221, says that the *quadra* is commonly 100 yards, the general distance between the corner of one street and another in America; but that it is a vague measure.

† In another passage, our author says that there are about 13,000 communicants, without including the colleges and religious, who being comprised with the persons under seven years of age, and many not enrolled in the *padron* or register, the population may be *cinco mil*, an evident error of the press, probably for 25,000.

TOWNS.

urgent occasions. The few who can employ ten, twenty, or thirty thousand dollars engage in trade, to maintain themselves and their families; but most are in search of some office in order to secure a subsistence, the means of commerce being rare and uncertain. Under the protection of the Indians, and within their hamlets or grounds, live many Creols reduced to poverty, who maintain themselves by cultivating a small portion of land, it being impossible literally to observe the laws of the Indian code, which prohibits this intercourse. These Creols and people of colour, sometimes exceeding the Indians in number, attempt to exclude them from the village, and to erect it into a parish; and the mixture insensibly produces the extinction of the Indians, who become metizos, zambos, and other mingled breeds, which abound in these provinces. This fact may be proved from the population of the district of Tunja, where, in eighty-five villages, are found 12,065 souls of this class; while in the four cities, six towns, and thirty-six parishes of this district, there only exist 20,220 souls: and it is to be presumed that the same rate prevails in the other provinces, for which no exact estimates have been given.

The secular jurisdiction of this capital comprehends seven little districts in its neighbourhood, with fifty-two villages, and 3017 Indians, not including the people of colour, supposed to be four-fold that number.

In the neighbourhood of this capital is the celebrated cataract called Tequendama, where the river Bogota or Funza falls from a prodigious height, and of which a description is reserved for the natural curiosities.

Other
Towns.

Before proceeding to the other principal cities, it may not be improper to give some idea of a few central towns at no great distance from the capital; and which from their position are less visited by travellers, and less known to the general reader. Such are, towards the east of Bogota, Tunja, Toca, Medina; on the south, San Juan de los Llanos, Neiva; and towards the west, Tocaima, Ibague, Mariquita, and Antioquia.

Tocaima.

Tocaima, in the immediate proximity of the capital, was founded in 1544, at some distance from the river Pati, (being the same, which nearer

its

its source is called the Bogota,*) not far from its confluence with the river Magdalena. The situation is bad, exposed to great heats and numerous venomous creatures; nay, it is even destitute of water, though La Cruz have placed it at the confluence of the rivers Magdalena and Pati. But the district is extremely fertile in cacao, tobacco, sugar, maize, yucas, plantains, potatoes, &c. and the fish are abundant in the rivers of Bogota and Fusagasuga, though there be many alligators. The inhabitants, about 700, are mostly poor. There are mines of excellent copper, which are not worked.

Tunja, founded in 1539, was formerly an opulent town, but has now declined, the inhabitants not exceeding 400. The edifices bear marks of former splendour, and the parish-church might well serve for a cathedral. There are three convents, which might very usefully be converted into manufactories. Toca is in a cold, but healthy climate, situated in a beautiful plain, producing wheat and maize, and there are manufactures of woollen cloth; the inhabitants about 200, half being Indians. It was formerly the residence of the fourth elector of the *zaqui*, or king of Tunja. Medina was founded in 1670, in a warm climate, abounding with wild cacao trees, maize, yucas, plantains. In the neighbourhood there is a mine of black salt, in a hard rock, used by the neighbouring villages to give to their cattle to lick.

San Juan de los Llanos is the capital of a large nominal province so called, consisting of prodigious plains, extending for two or three hundred leagues. The town was founded in 1555, and was formerly celebrated for gold mines now declined; and the inhabitants scarcely exceed fifty. Neiva was founded in 1550, but being destroyed by the Indians; was rebuilt in 1612, on the banks of the great river Magdalena. The soil is fertile; there is abundance of cattle, and some gold mines; the population being about 2000, of whom the greater part consists of people of colour. Ibaguè contains about 400 inhabitants, of whom one half are Indians. Mariquita is called a city, and was formerly celebrated for the rich mines of gold in the vicinity; there being on the west those of Bocaneme, and San Juan de Cordova, bordering on those

* Estalla, xxiii. 52.

Cities. of Hervi, Malpaso, Guarino, and Puano; and on the east, the silver mines of St. Anna, Lajas, and Frias; the silver, however, being mingled with the purest gold, but of difficult separation. This city, formerly opulent, is reduced to 300 inhabitants; a great disadvantage of mines in general being their failure, while those engaged in them, are seldom accustomed to other branches of industry. Quesada, the conqueror of New Granada, died at Mariquita in 1597, but his body has been transferred to the cathedral of Santa Fé.

Antioquia. Antioquia is the capital of a province so called, highly celebrated for the rich mines of gold, but its present state and population have not been explained. This rapid glance on the interior provinces will shew, that the mines have not much benefited this viceroyalty; and there seems to be some peculiar defect either in the localities, or in the management of this part of the Spanish dominions.*

Quito. But there are several important cities in various quarters of New Granada and its dependancies. The celebrated city of Quito, is said by Alcedo to contain not less than 58,000 inhabitants, Spaniards, Creols, people of colour, and Indians; there being among the former six with the title of marquis, one with that of count, and many knights of the military orders. The Creols of Quito are docile, humane, courteous, liberal, hospitable, and of considerable capacity. Even the Indians are celebrated for their skill in painting and sculpture. The temperature being uniform, the same clothing is worn throughout the year; but this advantage is balanced by the frequent earthquakes, and that of 1775 was very destructive. A body of militia has been established since the popular tumult in 1765. This celebrated city having been described by the French mathematicians, and by Ulloa, who has given a plan, it is unnecessary to enlarge on a trivial topic.

Earthquake, 1797. The upland plain to the south of this city, crowned with numerous volcanos, and the high mountain of Catopacsi, has been already mentioned, and frequently described as a terrestrial paradise. On the fourth day of February 1797, a quarter before eight o'clock in the morning, the

* It appears from the observations of Lequanda, that all the cities and towns between Carthage and Lima, have declined since the trade by the galleons was abandoned. The government ought to invigorate them by every assistance.

most terrible earthquake commenced that had been known since the CITIES. conquest.* At Quito little damage was sustained, but the subterraneous thunder, and the shocks repeated every six hours, occasioned unceasing horrors and dismay. On the fifth, in the evening, it was known that Latacunga, and all the hamlets in its *corregimiento*, were utterly destroyed, not one stone remaining upon another. Many persons perished, and the stench of the dead bodies infected the survivors. Near Ambato many mountains split, and by their sudden fall occasioned yet greater destruction among the human race. Quero, with all its people were buried in one instant, by a cliff which fell on the town. Pelileo was overwhelmed by a stream of water and mud; the circumjacent lands were all transposed; and the deadly silence declared the general ruin.

The elegant town of Riobamba became one heap of ruins and desolation, and soon totally disappeared; for the peak of Sicalpa falling on the town, and stopping the two rivers which pass by it, formed a lake, so that even the ruins were not visible. Of nine thousand inhabitants only about four hundred escaped. Alausi and Guaranda have also suffered greatly. The fate of Cuenca, Loja, Jaen, and Guayaquil, was at that time unknown; but the shocks do not seem to have extended so far. The cause seems to have proceeded from the volcano Tungarunga,† as the tremendous subterraneous thunders all proceeded from that quarter, and the greatest ruin was in its vicinity: towards the north the earthquake was faintly perceived at Pasto.

Utter ruin of
Riobamba.

Popayan, founded in 1536, on a delicious plain, is an ancient bishop- Popayan. ric, suffragan of the archbishop of Bogota. The whole inhabitants do not exceed 8000 souls. The town is in the form of a square, with regular streets, and handsome buildings. Though rain and storms be not unfrequent, there may be said to be a perpetual spring. The driest months are June, July, and August, when the south winds blow from the snowy mountains, and high defart of Purasi, distant half a day's journey. Among abundance of fruits, the chirimoya is the most delicate,

* See a letter from Quito, dated 20th February 1797, published by Estalla, vol. xiii. p. 248—254.

† The Tunguragua of other writers, between Latacunga and Riobamba. Pasto is at the distance of about 200 g. miles.

CITIES.

and sometimes weighs ten or twelve pounds. In the neighbourhood is a height covered with trees, called the M, because it has the form of that letter; and the town is surrounded with the river Maulino, over which there are two bridges; the great river Cauca, already deep and rapid, though not far from its source, passes at the distance of a quarter of a league; and in 1768 a bridge of one arch was thrown over a narrow part of the river. The inhabitants of Popayan are of noted integrity.

Guayaquil.

Guayaquil is another considerable city, in the southern part of this viceroyalty. It was founded in 1532; but afterwards transferred to its present position on a river of the same name. There is an unhealthy marsh in the vicinity, which infects the city with pestilential vapours, and where delinquents often escape from justice; so that the draining of this marsh, by a deep canal, is advisable on all accounts. The buildings are chiefly of wood; but since 1767, they have begun to use earth whitened, which is less exposed to accidents from fire. After the almost general conflagration in 1764, it was forbidden by the Audience of Quito, and by the superior government of Santa Fé, to thatch the houses with straw, or to surround them with boards or canes.* Eleven conflagrations, at different times, had before nearly ruined this city; but such is its advantageous commerce, that it has always resumed its station. The houses might as well have been built of stone; but habit, which is stronger than reason, has induced the inhabitants to use the same carpenters for their buildings whom they employ for their ships. The streets of the new town are strait, and sufficiently wide, but having no declivity, the rain water remains, and occasions disorders, and the filth is increased by these pools being made receptacles of ordures. A pavement was proposed, and is perhaps accomplished. The water used for drink is also unwholesome, the river being tainted with streams from the marshes and filth of the town. It is supposed that the population may be 10,000, though in 1774, as far as the documents went, it did not exceed 6,500; and in spite of all its disadvantages, it is supposed to increase, the trade offering many benefits to settlers, who are also often

* Estalla, xxiii. 21.

fixed in marriage by the charms of the women, for an ugly woman in CITIES. Guayaquil is mentioned as a proverbial rarity. The freedom of commerce, 1778, has improved the advantages of Guayaquil, so conveniently situated for trade both with North and South America.* Many Spanish ships which used to stop in the bay of Callao, proceed directly to Guayaquil; and the balance of the trade with Lima is in its favour. In short, our author observes, that if those who visited Guayaquil in former times were to see it now, they would suppose it quite another city. Possessed of almost the only grand and genuine haven on the western coast of South America, this city may well avail itself of its advantages. Accessible by a broad and majestic river leading to the port of Puna, at the distance of eight leagues, though large ships might proceed, it is usual to transfer the cargoes to balsas, a kind of navigable rafts, formed of large beams, of a wood nearly as light as cork. Upon these rafts the masters sometimes even form their habitations, adorned with little beautiful gardens, so that when the ships arrive, the whole river presents as it were a floating city.†

A great advantage of Guayaquil is, that its position is proper as an arsenal for the construction of ships, having abundance of woods in the vicinity, and provisions being very cheap. It was accordingly named for that purpose in a royal ordinance of 1767. The timber is not only abundant and excellent, but may be conveyed by numerous rivers. The balsam tree, the cinnamon tree, the pechiche, the guachapeli, whose roots yield strong curves; all these, and many other woods, are celebrated for their duration, and for their resistance to worms, and other accidents of the sea. The government of Guayaquil is chiefly military, there being two companies of infantry who form the garrison alternately with two others at Quito. Having extracted much useful information from a memoir of Requena concerning the improvements of this city, our author concludes with informing us, that Guayaquil is now one of the handsomest towns of Spanish America, the streets hav-

* In 1794, there was built on the little isle of Puna, at the royal expence, a wooden fortress, with a battery to defend the harbour. Here reside the officers who visit the ships that enter and depart. On the south of the island there are salt works.

† Estalla, xx. 285.

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ing been paved; and a piazza,* or more properly arcade running before all the houses, so that walkers are protected from the sun and rain, an advantage not even to be found at Madrid, except in the great square, and some parts of the main street. The houses are also improved, and covered with tiles. The malignant vapours chiefly reign in the month of April and May; and the draining of the marshes remains to be executed, as the greatest and last improvement.

Our author has also given a minute description of the province of Guayaquil, abstracted from that of Requena. It produces excellent chocolate, which, transported by Panama and Portobello, forms the chief cargo of the Spanish vessels which sail from Carthagena. This province, which exceeds the length in the map of La Cruz, experiences an extraordinary inundation in the winter, reaching as far as the sides of the Andes, where the inhabitants then retire with their herds. The thermometer of Reaumur is generally between 24 and 28 degrees, the rainy season being from January to June. Fevers, diarrhoeas, dysenteries, vomiting, and spasms, are the most mortal diseases, and prevail in what is called the winter or rainy season, though as warm as the summer. The *boba* or serpent, of prodigious size, is here found; and there is a snake about a palm in length, and of a bright silver colour, whose bite is mortal in twenty-four hours. During the inundation the caymans spread over the country; some according to Requena, being of the enormous length of nine yards; but in the dry season from June to December, they are little troublesome. The summer or dry season may, as in the tropics, be regarded as the coldest, and somewhat invigorates the inhabitants, enervated and rendered indolent by the climate. There is an annual fair at Babahoyo, where the people of Guayaquil meet those of Quito, and the adjacent towns. But in the rainy season Babahoyo is inaccessible, the inundation forming an oval lake about twenty miles in length; while the villages on the heights are only accessible by boats, and the inhabitants are moreover incommoded by animals of all kinds, who forget their antipathies, and take refuge from the flood. Funerals

* Johnson has quite mistaken the meaning of this word, which however vulgarly misapplied, does not mean the arcades in a square, but the square itself.

are conducted with great pomp, and music on the water, the churches being always on the high summits; and the whole scene recalls to memory the ancient accounts of the Nile. The beauty of the meadows and woods, when the inundation has passed, surpasses all description.

On advancing to the north of this viceroyalty, the towns of Panama and Portobello first solicit attention. Panama was the seat of a Royal Audience, abandoned in 1752; and the fire in 1756, and the total decline of commerce, have reduced this city to a miserable situation.

The dangers of the road between Portobello and Panama, occasioned by mountains, precipices, marshes, continual rains, horrible storms, dangerous fords, and above all the infinite number of venomous snakes, can scarcely be conceived; yet the mulattoes frequent it much on foot, and even regard the passage as a kind of amusement.* Some huts are found, where they sleep on straw, and the leaves of trees, taking care to clean the floor and stop up all passages for the snakes. The journey commonly occupies three days. Panama is still a strong city, but after its fall by the loss of the galleons, was almost completely ruined by a terrible conflagration in 1784. Its only remaining trade is with the villages in its jurisdiction, and with the province of Veragua, the goods being received by Portobello, mostly from Carthagena; the vessels from Peru commonly return empty. The neighbouring mountains produce excellent wood, especially the most esteemed mahogany, (*caoba*), and cedar, with many precious balsams. The spirit of trade ridiculously maintains itself, even the chief inhabitants of both sexes selling baubles and trifles by means of their slaves; and they call this commerce, while it is rather the game of commerce. The royal chest cannot even pay the garrison, which is now defrayed from Carthagena. Some excellent gold is found in the mines, or rather *lavaderos* of Santa Rita, but the pearl fishery is almost abandoned. The voyage to Guayaquil is short and easy, and the passage of the line rather accompanied with calms, while in the Atlantic it is esteemed dangerous. This circumstance may have led to the name of the Pacific Ocean, given by the Spanish conquerors of Mexico and Peru, before Magalhaens had felt its tempests. The

* Estalla, xxii. 310.

north



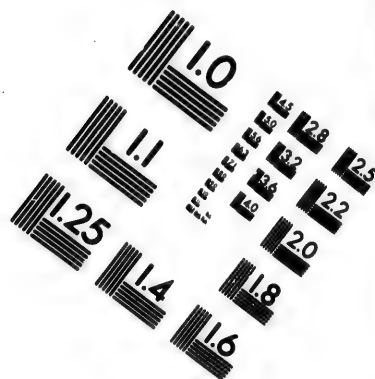
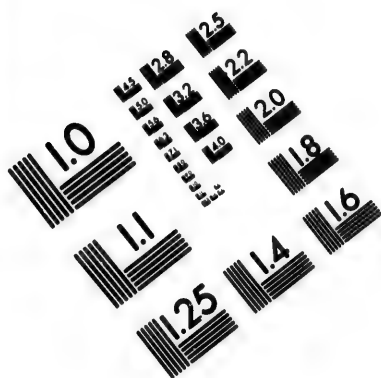
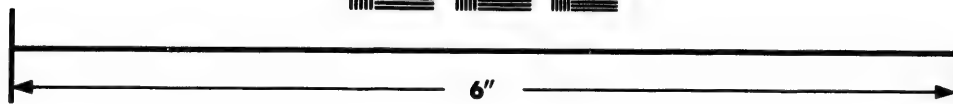
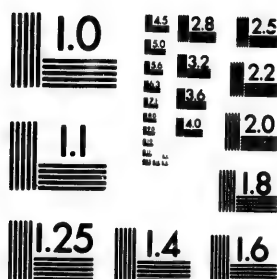


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CITIES.

north pole and constellation of the Lesser Bear soon become invisible, though the needle point towards them; and the southern pole arises marked with four bright stars in the shape of a cross.

Portobello.

Portobello, formerly celebrated, has also declined, though in the time of the galleons a rich and populous city. The dereliction of that mode of commerce has also greatly impoverished all the cities and towns between Carthagena and Lima. Portobello however is not so sickly, since a passage was cut through a hill to admit the air.*

Carthagena, once so celebrated, has also greatly declined. That part of the haven called *Boca Grande* seems gradually to widen by the efflux of the water, which enters by the *Boca Chica*, so that an enemy might have approached without encountering the terrible fortresses on the latter; but in the year 1777, this inconvenience was prevented by new works of surprising size and solidity. The want of a quay was also severely felt, till one was constructed by an individual, where are landed the provisions brought from Loricá, the rivers Zinu, Magdalena, and other places. The city has also been increased and adorned, the new houses being of elegant and solid architecture, and neatly furnished. The gloomy cathedral has been enlivened by enlarged windows; but the decorations are ill disposed, and shew the want of taste generally prevalent in commercial towns. The bishop Perez who, in 1793, was translated to Quito, shewed however considerable spirit in the improvements. Since the freedom of commerce, luxury has made a considerable progress in Carthagena, and European fashions prevail.† The mulatto women, and wives of artisans, instead of the mantilla, wear a cotton veil striped with various colours; while the ladies are distinguished by the fineness of their dress, especially of their stockings and shoes. Music and dancing also prevail; and the harpsicord and song are heard as in the most civilized cities of Europe. But in 1796 the theatre had considerably declined, as the best actors had passed to Santa Fé de Bogota. The number of artisans and little tradesmen had also increased, particularly tailors and shoemakers. The chief trade is in chocolate from Guayaquil; but the cotton trade began to make some progress, and

* Estalla, xiii. 247.

† Ib. xxii. 304

sugar began to be cultivated, especially towards the river Magdalena, CITIES. and town of Honda, the last port on that great stream. Of the copious cargoes brought for the fair of Portobello, by the fleets of galleons, Carthagena always received a little share, which, besides its own province, passed to those of Santa Marta, Santa Fe de Bogota, Popayan, and Quito. Returns were made in gold and silver, coined or uncoined, hides, chocolate, balsams, precious woods, and other articles of smaller note. On the extinction of the galleons after the peace of Aix la Chapelle, the commercial articles for Tierra Firmé and New Granada were directed to Carthagena; but the trade and returns were found so insignificant, that only one or two ships of between three and four hundred tons passed yearly, while the neighbourhood of Jamaica, Curazao, and the Leeward Islands opened a vast contraband trade over the whole coast, from Guiana to the river Chagre. The plan of *Register Ships* being also abolished, when the free trade was established in 1778, the contraband traffic was not entirely abandoned; and the privileges being extended to Santa Marta and Portobello, Carthagena lost considerably; as the former supplied, by the river Magdalena, the towns of Monpox, Antioquia, Honda, and the capital Bogota; while the second sent cargoes over land to Panama. But the loss promises to be compensated by the exports of chocolate and cotton. The port is also much frequented by the Catalonians from Barcelona, who bring silk and cotton cloths, wine, and brandy, taking in return raw cottons for their own manufactures. Some in the hopes of greater gain proceed as far as Choco, by the gulph of Darien, and river Atrato, a navigation formerly believed impossible, but now common, and performed by many boats from Carthagena, who return with gold dust as the price of their cargoes.

Carthagena was founded in 1533. The winter or rainy season, extends from May to November; and the heats are terrible from December to April, when the black vomit prevails.* Alcedo marks the num-

* Alcedo, part x. p. 181, says that this disease is cured by the Spanish physicians like any other, while at Havana, wine was regarded as an antidote. It was totally unknown, according to our author, till 1730, when it appeared on the *Guarda Costas*, commanded by Justiniani, and was felt at Guayaquil in 1740. Gasselbondo, a mulatto physician at Carthagena, was the first who committed to the press the method of cure in 1754.

CITIES. ber of communicants at 9160, and that of the inhabitants may probably be twelve or fourteen thousand.

Santa Marta. Santa Marta was founded in 1555, and has a good haven defended by two forts, but has considerably declined, the houses being now mostly of wood, covered with straw. This was the place of arms of Quesada, the conqueror of New Granada; and was reduced to ashes in 1596 by Sir Francis Drake. Piedrahita, who has written an history of the conquest of New Granada, was bishop of this city. The port is large and convenient, protected by lofty ridges, and has in front a round hill, which defends the city on the side of the snowy mountains, at the distance of three leagues. These mountains, clothed with perpetual snow, may be regarded as the termination of the main chain of the Andes, which passes, accompanied with its usual mineral opulence, between the rivers of Magdalena and Cauca, as already explained. The climate is less hot and more healthy than that of Carthagena; and Santa Marta is supplied with excellent water from the river Goegaira which passes near; its banks being crowned with beautiful groves of trees, and among others, one whose leaves bear an unctuous appearance, and are used as soap. The environs produce cotton, tobacco, some wine, cacao, Brazil wood, sugar, vanilla, and some wheat. There is also abundance of cattle; and some mules are bred. The population of Santa Marta has not been indicated. There is a pearl fishery at Carrizal, on the south of Cape Vela, sixteen leagues to the E. of the city of Santa Marta, which being ill conducted, only yields about 30,000 dollars. There are copper mines at Ocana, and gold mines near the river Ariguana, thirty leagues from the city. Ornaments of tombac have been found in the tombs of the Indians. Estalla, who has given a minute and interesting description of this province, says that it only contains betwixt twenty-five and thirty thousand souls, the population of a mere European town.

Some other towns in the northern provinces may deserve mention. When M. Bouguer returned in 1743, from measuring a degree under the equator, he passed along the river Magdalena to Carthagena. Of the two most remarkable towns on that great river, he found the latitude

of

of Honda, the most southern port, to be $5^{\circ} 16'$, and the longitude east ^{TOWNS.} of Quito $4^{\circ} 9'$; while the latitude of Mompox, a very commercial port on the western shore of the Magdalena, is $9^{\circ} 19'$, the longitude $4^{\circ} 15'$. Porquera, a village on the western side, three leagues from the mouth is $10^{\circ} 59'$, and the long. $3^{\circ} 58'$. He found Honda to be a very pleasant little town;* and Mompox has also a handsome little harbour about seven leagues above the confluence of the Magdalena and the Cauca. The Magdalena is a grand navigable river, and on its banks between Plata and Honda, Bouguer observed large masses of black rock, impregnated with iron, for they affected the magnet.† About three leagues below the hamlet of Bacche, he observed two very remarkable, the largest being about twenty feet in length and eleven in height. The face is even, without any cracks, and according to our author presents many figures and characters. Similar stones are also said to be found nearer the mountains. It is to be regretted that Bouguer did not publish the drawing which he took, for the circumstances are rather surprising. He adds, that they are absurdly called in the country *piedras pintadas*, or painted stones. "Perhaps all these figures and characters form one inscription, and mark by hieroglyphics the time and circumstances of the eruption of volcanos, or some other event, perhaps extraordinary inundations of the river. It appeared to me at least that it was a work of deliberate intention, and performed with great patience, the hollow of the figures being at least two and a half inches in depth." As these stones are strongly impregnated with iron; and the calx of that metal, when decomposed, leaves singular impressions on the stones which con-

* Alcedo marks the latitude of Honda $6^{\circ} 48'$, and with his usual confusion, says that it is twenty leagues to the S. W. of Santa Fé. His whole longitudes and latitudes may be proclaimed to be one mass of errors, and it is even inconceivable what maps he could have used. The historical and descriptive parts of the work are nevertheless invaluable.

Honda is the chief mart of the commerce between Quito and the northern provinces. *Bouguer.* At Mompox, there is a royal custom house, but it has suffered from inundations of the river, particularly that of 1763. He adds, that Mompox has a handsome quay of considerable height, as the river rises regularly twelve or thirteen feet in the beginning of December. Above Mompox, the Magdalena runs mostly over rocks and sand, but below there are many marshes. The mountains near Honda and Mariquita, often assume the form of chapels, domes, castles, and fortified towns, the soil having apparently subsided.

† Bouguer, *Figure de la Terre*, p. lxxxiv.

Towns.

tain it, as in the case of the figured stones of the Orkneys, which present figures of human ears and eyes, &c. it is not impossible that these supposed hieroglyphics and inscriptions may be the work of nature. But Bouguer is so clear and accurate an observer, that there is room to doubt, and the subject deserves examination, as there is no evidence that the Peruvians penetrated in this direction; and it is besides universally known that they only used *quipos*, or knots, being utter strangers to the use of hieroglyphics or letters.*

Commerce.

It has already been seen that the commerce of this viceroyalty has suffered by the suppression of the galeons, and has not yet even resumed its vitality, though encouraged by the freedom granted in 1778. The contraband trade, carried on by the English on the Musquito shore, and from the Portuguese settlements in Brazil, not to mention the Caribbean sea, has also impeded the exertions of the Spanish colonists.† As the chief revenues of England arise from traffic, and the custom-house affords the main branch of her revenue, it is natural that the government itself should wish to extend her trade to the utmost possible degree. But whether the means be sometimes strictly reconcilable with moral and political justice, must be left to the judgement of posterity. Certain it is, that the most candid writers of foreign nations, affect to regard the intrusion of our articles as oppressive to the industry and prosperity of other countries; but a patriot may approve what a cosmopolite would condemn. Estalla informs us, that not many years ago, an Englishman, suspected of secret intelligence, was seized at Portobello, who avowed his connection with another Englishman, called Corrink, a rich inhabitant of that place. Several papers and plans were seized, intended for the governor of Jamaica, indicating the facility of opening a traffic with the Pacific, by forming a settlement on the river of Nicaragua, the expence of opening the country being calculated to be more than repaid by the sale of the precious woods.‡ But as Spain neglects that grand aperture, she has scarcely a right to blame any nation, which should, with

* Similar monuments are said to exist in New Spain, and the Mexican customs seem to resemble those of the indigenes of Bogota.

† Bouguer has observed, that no Spaniard would follow any trade; and the Indians of the uplands are always the most indolent.

‡ Estalla, xxii. 294.

more magnificent and liberal views, endeavour to open a canal between the Atlantic and Pacific oceans. COMMERCE.

The commerce of the viceroyalty of New Granada, is allowed to be little proportioned to the great advantages of the territory.* Its existence depends in a great measure on the gold from the mines, and a few manufactures, and native products. The manufactures are chiefly at Tunja, Socorro, Velez, and other towns and villages towards the plains; and consist of cotton cloths, with carpets, counterpanes, and coarse woollens of various descriptions, that support internal trade. The northern provinces produce excellent woods for the construction of ships; and the dying woods are superior to those of Campechy. The *caoba*, or mahogany, of Panama is of exquisite beauty, and superior to all others. The chocolate from the banks of the Magdalena is esteemed equal to that of Caracas; and vast harvests of cotton and tobacco might be gathered, while the navigable rivers Magdalena and Atrato, and the ports of Carthagena and Santa Marta, offer easy and convenient outlets to the European markets. The intermediate mart of Havana presents another convenience to the traffic of this viceroyalty; and it seems inconceivable why it should not be the most industrious and flourishing of the three, if the tropical situation do not conspire with some unknown causes to damp the exertions of the inhabitants. Mr. Nugent, an Irish gentleman, established in the province of Guayaquil, has introduced the culture of coffee. About three thousand trees have been planted, which have attained the height of about twenty feet, and the fruit has been found equal to any in the West Indies: but chocolate, as already mentioned, continues to be the chief staple of Guayaquil, passing to Europe by Carthagena. So numerous and diversified are the salutary and useful vegetable productions of these extensive provinces, that industry alone is wanting to open all the sources of commerce. One of the first steps should be to form an estimate of its present state; and Lequanda, in his account of the commerce of Peru, has instituted a noble example; but the trade of La Plata and New Granada, has not met with such able illustrators.

* Estalla, xxii. 319.

NATURAL
GEOGRAPHY.
Climate.

The climate of this extensive viceroyalty presents infinite variety; for though lying under, and in the near vicinity of, the equator, the vast and sublime chain of the Andes, running N. and S. from the table land of Quito and Cuenca, to the Caribbean Sea and environs of Santa Marta, occasions every diversity from the snow and ice of the poles, to the rain and heat of the tropics. While the ancients conceived the torrid zone totally uninhabitable, on account of the vertical sun, the theoretic geographer might be frozen to death on the summit of a mountain, or drowned in the continual torrents of rain. But God creates worlds, and man creates theories. In the dreadful pass of Gouanacas N. lat. $2^{\circ} 34'$, between Popayan and the little town of Plata, the traveller traverses the eastern chain of the Andes, which continues its progress between the rivers Magdalena and Cauca, maintaining its grandeur and chief altitude till it expires in the snowy mountains of Santa Marta, or, according to our author, at the junction of the two great rivers just mentioned.* Though the greatest precautions be used, yet, for the space of two leagues, the road was found so much covered with the bones of travellers who had perished, that it was impossible to set down one's foot, except upon these terrible memorials. To the S. of this pass, is the lofty volcano of Cocunucu, and towards the N. the mountain of Houila equally clothed with snow. At less than a hundred fathoms distance, appear the source of the Cauca on one side, and that of the Magdalena on the other, prodigious rivers, evincing the extreme altitude of this part of the chain: and though the road from Popayan to Plata be only twenty leagues, from twenty to twenty-two days are employed, so great are the difficulties of the road, so terrible the climate encountered within two degrees of the equator! Even the climate of Bogota, the capital, as already mentioned, may be accused of cold; and the desert heights of Albarazin on the E. temper the fervours of the tropical sun.

Seasons.

The names of summer and winter expire under the tropics, where, if mountains do not interfere, there are only the wet and dry seasons; and the former, which is called winter, is often of superior warmth.

* Bouguer, *Figure de la Terre*, p. lv.

The

The effect of the rains in Guayaquil has already been described, and the eternal spring of the table land of Quito; but this table land seems to terminate not far to the N. of Popayan. The clouds on the Andes, often present the image of the spectator, with a glory around his head, like a rainbow of three colours, the external being red; but at a distance there is a large white circle which surrounds the whole. This singular apotheosis is only seen by the person represented, a lively image of human vanity.*

The great rivers Magdalena and Cauca rise and terminate in this vice-royalty. According to the map of La Cruz, the very sources are considerable streams, perhaps the issues of subterranean waters, from the vast cavity under the table land, where the volcanos often pour out destructive torrents of water and mud; but the natural history of these rivers has been little illustrated, and the work of Mr. Humboldt is impatiently expected. The navigation of the Cauca, between Popayan and Antioquia, is rendered dangerous by winding rapids, which however the Indians pass in their canoes. The Magdalena, as already mentioned, is a majestic navigable stream, the Danube of New Granada. An account of the grand belt of the Andes, has been given in the general account of South America. Humboldt informs us that the volcanos of Quito eject pumice, basalt, and porphyry scorified; and enormous quantities of water and liquid clay, which diffuse fertility eight or ten leagues round.† Running lavas seem to be absolutely unknown, both there, and in New Spain. The subterranean noise of Cotopacsi may be heard at a distance of the space between Vesuvius in Naples, and Dijon in Burgundy; but in spite of this prodigious force, the lava cannot reach the crater, nor pass the sides of the mountains, which are fortified by high plains. But why suppose that lava exist? Great explosions are periodical and rare. Cotopacsi, Tunguragua, Sangay, offer none perhaps in twenty or thirty years; but these volcanos throw out prodigious quantities of mud, and what is still more striking, vast numbers of fish, so as sometimes to infect the air with putrefaction. These fish appear to be little injured by the water, and are the same with those found in the rivulets at the bottom of the volcanos, being a *pimelodes*.

Seasons.

Rivers.

Volcanos of Quito.

* Rouquer, xlv. See a plate in Ullon's Voyage.

† Obf. Zool. Paris, 1805, 410.

silurus.

RIVERS.

silurus, from two to four inches in length : but they are very rare in the rivulets, which they probably remount in order to pass to subterranean lakes, and are caught by the Indians at the very source of the rivulets. Mr. Humboldt concludes that the nature of volcanic heat is as yet totally unknown. It would seem that these volcanos are about to be extinguished, since they are gradually filling with water, as the crater of an extinct volcano generally forms a lake, but that the heat is still sufficient to cause ebullitions. The volcano which was the most noted for this phenomenon in the last century, is now actually extinct.

The chain extending on both sides of the province of Santa Fé has been little described, but Alcedo informs us, that the highest point is probably that of Gachineque near Turmeque. There do not seem to be any volcanos in this part.

Botany.

The botany of New Granada has not been duly illustrated, though it be said that Bogota is the residence of an eminent botanist. The labours of Mr. Humboldt will no doubt leave little to desire on this subject. Some of the most useful vegetable productions have already been specified.*

Bouguer has described the celebrated fruit called *chirimoya*, as often larger than the largest apple, while the rind is not stronger than that of the fig, and the colour a little deeper ; but it is as it were engraved, or marked with little scales, while the pulp is white and fibrous but exquisite.

The *Ceroxylon Andicola* or Wax Palm, grows on the Andes, at the height of eighteen hundred yards to two thousand nine hundred yards, in the country between the valley of the Magdalena and Cauca. The space on the trunk between the rings left by the fall of the leaves, is covered about one-fifth of an inch thick with a natural mixture of resin and wax, in the proportion of two of the former to one of the latter.

The *Matissa cordata* grows wild and cultivated in New Granada and Peru. It bears a large fruit like an apricot.

* The balsam of Tolu is so called from a village in the province of Carthagena. Among the beautiful woods are the *mune* streaked with red and black, the *guapana* with grey and black ; and many other kinds, which, if fashion permitted, would far outshine the mahogany. The best cochineal is from Sogamoso. There are palms so high that the fruit cannot be gathered except by the birds. The varnish called *mopamopa* is the resin of a tree in the district of Pasto, and is said to equal the Chinese. Estalla, xxiii, 38.

The *Myrtus Microphylla*, a beautiful evergreen shrub, grows near Loxa in Peru. * BOTANY.

The animals are in general such as are common to the whole continent of South America, and the scientific reader will consult the work of Azara. The tapir, (the danta of the Spaniards, the anta of the Portuguese,) is well known, as are several kinds of wild boars and deer; the ant-eater is not uncommon. The jaguar called the American tiger, though he appear to be spotted and not striped, is the most ferocious and dreaded animal, and attains a great size; while the puma, of an uniform colour like the lion, rarely attacks mankind. The wild cats of two or three kinds are little dangerous; and in general the musquitoes and other noxious insects are more to be dreaded than quadrupeds. Bears are familiarly mentioned by the Spanish writers, but they probably mean the ant-eater, as Alcedo specifies; and it may be difficult for an exact naturalist to trace the black or brown bear in these climates; † nor does that animal seem even known in Chili, if we judge by the account of the accurate Molina. The bears found in North America seem to have passed on the Arctic ice from Asia and Europe. Serpents of enormous size, such as the *buia* or *boba*, are found in the marshes; and the cayman or alligator swarms in the rivers. ‡ ZOOLOGY.

The mineralogy of the viceroyalty of New Granada is far from being unimportant. Alcedo observes that gold is here more abundant than in any other part of America; and in Antioquia, and several other towns, no other money is known. The richest provinces in gold mines are those of Choco, and Antioquia, which are also easily accessible by the rivers Atrato and Guacuba, which enter the gulph of Darien, and are navigable for a considerable extent. § Silver is also remarkably pure; and the mines of Marquetones, in the district of Pamplona, are so rich that, if there were a sufficient number of labourers, they might rival those of Potosi, as they sometimes yield eight marks of silver in the hun- MINERALOGY.

* Humboldt.

† In the charming romance of Robinson Crusoe, Dr. Foe seems to use a poetical licence when he makes Friday kill bears in his own country.

‡ Near Punta, on the coast of Guayaquil, was formerly found the purple shell fish of the ancients, and it was used as a dye.

§ Eñalla, xxiii. 74.

MINER-
ALOGY.

dred weight. Copper and lead also abound, but are despised. There are mines of beautiful emeralds in the district of Muzo, superior to those of Somondoco in the district of Tenza; and in these mines are also found *pantauras* (a kind of precious stone not described,) of various colours, with grains of gold in the interior. Alcedo adds that in the mines of Antioquia and Guamoco, diamonds are found among the lumps of gold, but are of a small size; with jacints and beautiful garnets. The river Hacha has always been celebrated for its pearls, and Timana for amethysts and *pantauras*; while Pamplona, Susa, and Anserma, boast of their turquoises, girasols, gallinazos, or obsidian, and *mapulas*.*

Estalla adds that the silver mines of Mariquita and Pamplona have been abandoned, and that gold alone is coined at the mint of Bogota.† Copper is found in the district of Velez, but is little worked, from the want of machinery and miners. The province of Darien having been abandoned to the Indians, the gold mines are mostly lost.

Emeralds.

Muzo, the seat of the celebrated mines of emeralds, is in the district of Tunja; and 200 families, which inhabit it, are chiefly occupied in availing themselves of this precious advantage. In 1764 the viceroy of Peru ordered these mines to be examined; and the veins, which had disappeared, having been found, the labour was ordered to be resumed on account of the royal treasury. This singular and celebrated mine is in the mountain of Itoco, at the distance of three leagues from Muzo; which is distant about 50 B. miles to the north from the capital. There are also in the neighbourhood of Muzo some mines of copper. Muzo is supplied with provisions from the neighbouring town of Ebate.

These emeralds of Muzo have for many years supplied the world with that precious stone; and the quantity must be great when they are worked as a perpetual mine. They are generally in a gangart of pure white.

* Alcedo mentions that the *mapula* is a precious stone found in the mines of Anserma; and that the *pantaura* is of a clear amethyst colour, pervaded within with little streaks of a deep crimson.

Coletti gives the following list of the mountains in the viceroyalty of New Granada:

Abibes

Fosca

Abipi

Gachaneque

Becaneme, *Mine of silver*Itoco, *Mine of emeralds.*Buritaca, *Mine of gold*

† Estalla, xxii, 322.

quartz, which enhances the extreme delicacy of the green colour; but there are examples of their occurrence in a fine grained schistus like touchstone. That in the Hotel des Monnoyes, at Paris, is not regularly crystallized, but in a lump, and scattered fragments, on very thin veins of quartz, which pierce the schistus. It is evident that all the mineralogists are grossly deceived, when they call these beautiful stones emeralds of Peru, for the mines of New Granada were celebrated even in the time of Ulloa, 1740;* while it is even doubtful if there ever were any mines of emeralds in Peru. These stones are indeed said to have been found in the tombs of the Incas and chiefs, wrought into cylinders and other regular shapes, and pierced with holes for ear-rings and other ornaments, a work of no great difficulty, as the stone is soft, being only 12, supposing the diamond 20, while the oriental emerald found in Upper Egypt and on the western confines of Tibet is extremely hard, as Pliny has specially described; who in treating of the emerald has particularly mentioned the two noble kinds of the above countries, probably belonging to the genus Corindon, as do the oriental sapphire, ruby, and topaz, which only differ in colour, and whose hardness is 17. The emeralds found in the Peruvian tombs might probably have been procured from New Granada; for as to the supposed mines in the districts of Atacames and Manta, so carefully concealed by the Indians, it may rather appear doubtful that they ever existed; † and it would appear little probable either that the Spaniards should neglect such a precious production, or that the Indians should so particularly conceal these mines, while they are constrained to work in so many others, which, from the metallic vapours, must be far more unhealthy. If this precious stone be found in Peru, or rather in Quito, which itself never formed a portion of Peru, they were probably rolled down by the rivers. The importance and peculiarity of the topic will excuse this discussion.

* Alcedo says that they were discovered by the captain Juan de Penagos, but does not assign the date.

† Atacames or Tacames is a district in the western part of Quito to the north of Guayaquil, also called Esmeraldas, or the County of Emeralds, with a river of the same name. D'Anville in his map of Quito has marked the supposed lost mine of emeralds, about 20 miles to the south of the town of Tacames. Manta is a village in the province of Guayaquil, near the village of Monte Cristo, which is also called New Manta.

In 1697 Careri, vi. 219, speaks of emeralds as being only found in New Granada.

MINES.

In the time of Ulloa the province of Papayan abounded in mines of gold, the richest being those of Cali, Buga, Almaguar, and Barbacoas; and there were also several mines of that metal in the noted district of Choco, some of which were abandoned on account of the abundance of platina, a more rare and singular metal than gold, but at first, as appears from our author and Bouguer, mistaken for an obdurate pyrites. Other gold mines were near Zaruma, within the jurisdiction of Loxa; and some in the government of Jaen Bracamoros. Near the village of Angamarca, in the jurisdiction of Latacunga, was a mine of prodigious value. That rare and singular metal called platina is still believed to be a peculiar product of Choco. It is generally found in minute pallets, but Humboldt is said to have brought a piece more than an inch in length.

Natural
Curiosities.

Natural curiosities abound in this extensive viceroyalty; and there are singular features, from the upland plain of Quito to the environs of Santa Marta. The volcano of Duida, mentioned in the general description of South America, is in Spanish Guiana, which rather belongs to the government of Caracas; and no volcanos seem to be known in the two grand chains of the Andes which pass to the W. and E. of Bogota. * Those of Quito have been already described; and Humboldt informs us that even some caverns throw out flames, and sometimes large plains are hollow. In 1766, after earthquakes that lasted for eleven months, a plain opened on all sides ejecting sulphureous water and bitumen. But a more pleasing natural curiosity occurs in the neighbourhood of the capital Bogota, where the river of the same name also called the Pati and Funza, falls from a height of 220 feet according to Estalla; † but according to the accurate Bouguer this cataract is one of the highest in the world, as it must be two or three hundred fathoms in height, and the fall is vertical. ‡ Alcedo, who is often copied by Estalla expressly says that the height is 220 *estados*, or fathoms of six feet each, which being corroborated by Bouguer, the real height of this

* La Cruz has marked the volcano of Ebojito about 80 B. miles W. of Antioquia.

† Estalla, xxii. 281.

‡ Figure de la Terre, xci. As the 200 fathom of Bouguer make 1200 feet, it is probable that Estalla, or his printer, has for *dos* or twelve, put *dos* or two: and all the Spanish authors regarding this fall as what they call a prodigy of nature, the 200 feet can bear no proportion to such expressions. Bouguer informs us that this wonderful cataract is about 15 or 16 leagues beneath the city of Bogota, and about eight leagues from the river Magdalena; and that the city of Bogota is about 8400 feet above the level of the sea; so that there must be even here a high table land.

stupendous

stupendous cataract is probably about 1320 feet. * The river Funza, which is even here very considerable, passes along a narrow channel on a high table land, and is poured, as from the spout of a vase, in one arch of the enormous height above expressed, the noise being heard at the distance of seven leagues. This fall is received in a vast chaldron of more than a league in circumference; and the quantity of the water, and violence of the descent, form a continual mass of clouds, which renders it scarcely visible in the evening; but in the morning it is more striking, being decorated with numerous rainbows according to the position of the spectator. The vast rocks, which form the chaldron, also excite admiration, being as regular and polished as if cut with a chissel; the surrounding heights are covered with trees, shrubs, and flowery plants, while the splendid appearance of some of the birds, and the music of others, render the cataract of Tequendama alike sublime and beautiful.

NATURAL
CURIOSI-
TIES.

* There are cataracts in Italy of 2,400 feet. See Vol. i. p. 697.

SUPPLEMENT.

GOVERNMENT OF CARACAS.

*Extent.—Population.—Manners.—Government.—Royal Audience.—Defence.—
Products.—Commerce.—Revenues.—Cities and Towns.—Natural Geography.*
—SPANISH GUIANA.

EXTENT.

THE government of Caracas is so called from the chief town Leon de Caracas; but was properly the indigenal appellation of a tribe in that quarter.* The list of Captains General or Governors of Caracas may be found in Alcedo's work; and extends from 1528, when Alfinger conquered the country for the Welfers, (a German mercantile house, to whom Charles V. had assigned the property,) till the year 1785. The chief or largest province was originally called Venezuela, or Little Venice, from a village of the savages in the lake of Maracaibo; but the government now comprises the adjacent provinces of Maracaibo, Varinas, Cumana, (including Barcelona), Spanish Guiana, and the isle

* The following account of the government of Caracas is derived from the work of Depons, entitled, *Voyage a la Partie Orientale de la Terre Ferme*, &c. Paris, 1806, 3 vols. 8vo. and a chapter of Estalla, xxiii. 105, concerning the province of Venezuela. It is surprising that Depons, who had resided four years in the country, should suppose that Caracas is a part of the Tierra Firmé, which is quite in a different direction, and never appears to have comprised more than three provinces, Veragua, Panama or Tierra Firmé Proper, and Darien. The name seems merely to have arisen from the surprise that so narrow an isthmus should be so firm as to resist both oceans. It is still more surprising to find Dr. Robertson, Am. iii. 374, falling into the same error; and in the next sentence supposing that New Granada is an inland country, and that Veragua is subject to the viceroy of Mexico! The state of American geography may thence be estimated.

of Margarita. The government, in this extent, has existed since 1730, and the governor acknowledges no superior except the king. The province of Merida is merged in that of Varinas; * and the name of New Andalusia has been properly exchanged for that of Spanish Guiana; while that part of Brazil which is to the N. of the Orinoco has begun not improperly to assume the name of Portuguese Guiana. † The establishment of the Royal Audience of Caracas, when the Spanish part of Hispaniola was resigned to the French, further ascertained the clear jurisdiction and boundaries of Caracas.

In 1498 Colon inspected that part of the coast called Paria, on the west of the strait called by him the Dragon's Mouth; but little progress was made in the settlement till Charles V. sold the country to the Welfers of Augsburg, who were dispossessed about 1550. The chief conqueror was Lofado, who founded the city of Caracas in 1567.

The following table of the population is given by Depons, but the round numbers rather infer some exaggeration.

Venezuela, including Varinas	-	500,000
Maracaibo	- - -	100,000
Cumana	- - -	80,000
Spanish Guiana	- - -	34,000
Isle of Margarita	- - -	14,000
		728,000

The whites form about two-tenths, the slaves three, the freed men or their descendants four, and the Indians the remainder. ‡ The Spaniards do not easily pass to the colonies, a permission from the king being required, which is commonly limited to two years; and Spain

* Four districts were disjoined from Venezuela to constitute the new province of Varinas; namely Apurí, Meta, Nutrias, and San Jayme. Est. xviii. 108.

† Mentelle, whose works are one mass of errors, has in his *Cosmographie*, iii. 350, &c. Paris, 1801, 8vo. totally confounded all the divisions. The Dictionary of Vofgien is equally erroneous.

‡ Estalla computes the plantations of cacao in Venezuela at eleven hundred and forty-four; two hundred and twenty of indigo; four hundred and thirty-six of sugar: the population 333,359, of whom 79,237 whites; cattle 649,153; horses 144,866; mules 7551; while the sheep and goats are innumerable. This account is taken from that of 1787 by Don Joseph de Castro, by orders of the Intendant. A minute account of each *partido*, or district of Venezuela may also be found in the work of Estalla.

POPULATION. watches over the innocence of her colonies by requiring a certificate of good morals. Strangers encounter yet greater difficulties; and by a royal ordinance of the 3d August 1801, a considerable sum is required for their residence. As the morals depend almost wholly on education and first impressions, Sanz, a creol advocate of Venezuela, deserves the gratitude of his countrymen for his attempts to reform that practised in Caracas. The premature use of the grammar of Nebrija, which is written in Latin, by confounding the understanding of the children, gives them a decided aversion to learn; and the philosophy of Aristotle is little calculated to open the mind to the modern light of science. Yet the creols of Caracas are ingenious, fond of learning the French and English languages; from history can somewhat judge the future from the past, and from geography learn the important practical study of man, and the relations and intercourse of nations. The Spaniards in general marry very early; the girls at twelve or thirteen, and the boys at fifteen. If not destined for the church an unmarried youth of twenty is regarded as an old bachelor. This proceeds, in a great degree, from the authority of the parents being restricted; for a girl who wished to marry might demand her deliverance from their power; and a public assertion of a boy and girl that they took each other for husband and wife was considered as a legal marriage. This freedom, so little expected in the Spanish customs, probably arose from a wish to increase the population; but by an ordinance of 1803 his catholic majesty has declared that young men under twenty-five, and girls under twenty-three, cannot marry without the consent of their father: and the penalty on the clergyman, who shall join such persons, is banishment and confiscation of goods. Yet the old Spanish etiquette maintains its ascendancy in these distant provinces; and a litigious spirit diffuses an additional melancholy. So numerous are the Spanish lawyers that, in 1792, there were more than seventy advocates in the city of Havana. There are also such numerous retainers, that the annual law expences incurred in the Audience of Caracas have been computed at 1,500,000 dollars. Yet the Spaniards and creols of Caracas are generally mild, affable, and extremely polite; and, from an excess of prudence, their enterprises commonly border on timidity.

A conspiracy however had almost excited a violent commotion in the province of Venezuela in 1797. The specious appearance of the new French principles had inflamed a few enthusiasts; and some measures of the police had irritated the people. But the conspiracy was timeously discovered; and the Royal Audience condemned some of the leaders, though the benignity of the monarch had granted an universal amnesty. Whether the attempt of Miranda shall meet with more success must be left to time to discover.

EDUCATION
AND MAN-
NERS.

The slaves are meanly clothed, and rather severely treated; but they may obtain their ransom if they can repay the price. The freed negroes are however always the worst members of any society. The irregular amours occasion the exposition of many children, who are often saved by negro and mulatto women: but a foundling hospital, which when founded on liberal principles is one of the noblest of institutions, as it not only saves the life of the child but the crime and punishment of the mother, is still wanting in the government of Caracas. Depons has justly applauded the extreme mildness of the Spanish laws, with regard to the Indians. Their magistrates are chosen from among them-
Indians. selves; they are exempted from most taxes, but between the age of eighteen and fifty pay a moderate capitation of about two dollars a year. They are regarded as minors in all contracts with Spaniards, which only become valid when confirmed by the judge, nor are they subject to the inquisition or any ecclesiastical censure. The Spanish casuists have even decided that they may eat human flesh, because in no code human or divine is that practice marked as a sin. Yet with these advantages the Indians seldom become good citizens, and can scarcely resist any occasion of theft or intoxication, falsehood, and even perjury and incest. Their falsehood is so proverbial that the testimony of six Indians is, by the Spanish law, regarded as only equivalent to that of one European. Constantly false from the infirmity of their understanding, they naturally suspect the sincerity and intentions of others, and never give a direct answer to any question. According to our author they seem incapable of any idea of the mysteries or pure morals of Christianity; and the conception of a God is infinitely above the utmost reach of their minds. Perhaps all atheism may arise from the same weakness, for in

no

A con-

INDIANS.

no country whatever has any man of distinguished talents been an atheist, though some deists have most absurdly been so called. The improvement of their situation is an object of enlightened beneficence. If they were taught little wants, if they were always well rewarded for their labour, and found every exertion of industry crowned with success; if in short they were allured and not driven to civilization, considerable benefits might be expected. They have too often been treated like wild beasts who are to be tamed; while the secret is to treat them like children who must be taught: and the lenity of the Spanish policy with regard to this unhappy race, which often renders them mere spoiled children, might occasionally be tempered with a moderate and parental severity, in order to teach them habits of industry.

Government.

The regulations of the Spanish colonies have already been explained, and the profound policy by which they are kept dependant on the parent country; while the English freedom and industry rendered our colonies almost independent; and the French only regarded a colony as a situation to acquire some wealth which they were eager to enjoy in Europe. The governor of Caracas represents the monarch throughout the provinces of Maracaibo, Varinas, Caracas, Cumana, Spanish Guiana, and the isle of Margarita; all the military department being completely subject to his orders, though on great occasions he consults a *Junta de Guerra*, or council of war, composed of the chief officers. There are however delegated governors for each province, appointed for five years, with a lawyer as an assessor. Though the Governor General be president of the Audience, the place is merely honorary, as he has no vote nor voice. The whole system is subjected to the Council of the Indies in Spain, and as he is obliged to render an account of his administration, acts of despotism are extremely rare; and equity is inculcated by a prohibition to purchase property, to trade, marry, or form any connections in the colony. The salary of the Governor General of Caracas is nine thousand dollars a year; and he is generally appointed for seven years. The account which he is obliged to render of his administration is by the Spaniards called *dar residencia*, and is a grand example worthy of imitation. A commissary, generally a lawyer, is named by the king to receive this account; and he gives notice that, at

such a time and place, the Court of Enquiry will be held, where all persons whatever, particularly Indians, who may consider themselves to have been aggrieved by their late viceroy or governor, shall be heard and their complaints redressed. A governor is obliged to remain sixty days; and other sixty days are required to hear and decide the complaints: but a viceroy must remain for six months: nor can any new situation be obtained, except upon a certificate that they have passed the forms and term of their residence.

GOVERN-
MENT.

The Royal Audience of Caracas was established in 1786, and its power extends over all the provinces included in the Captaincy. Besides the governor as honorary president, there is a regent with 5300 dollars a year, three *oidors* or judges each 3300; two fiscals civil and criminal, a recorder, and a grand alguazil. The members wear black silk robes, and the remainder of the dress is also black. The sittings are from eight o'clock in the morning till eleven; and the procedure is very slow, as all the papers of a process are read by the recorder: but it is supposed that affairs will be more expedited since the ordinance of 1802, requiring a yearly account of the judgments. As every measure has always been exerted to appoint only enlightened and honourable men, the Royal Audiences are highly respected, while their equity is enforced by many regulations, to prevent their forming any connections in the country. Besides their high magistracy, they are habitually consulted by the viceroys and governors as a council of state; and on the death, or absence of the viceroy or governor, his entire power falls into their hands. The members may demand an Audience at any time; and the Audience itself is addressed with the title of Highness.

Royal
Audience.

The cabildos or municipalities are seldom composed of more than two ordinary alcalds. The armed force of Caracas is of little importance. Maracaibo is defended by three forts, and a few companies of troops of the line and militia: though the population be about twenty five thousand, it is as it were insulated by desarts from the nearest town Truxillo, and incapable of long defence. The best defended haven is that of Porto Cavello, which is guarded by a strong fortress with large artillery, on an isle to the N. E. of the town; and the fire of which is crossed with that of forts on the W. In case of attack all the militia, to the

Defence.

DEFENCE. amount of three thousand, might join at Porto Cavello in the space of eight days; and as there are many brave and industrious Biscayans in the town, the defence might be firm. Guayra, five short leagues from Caracas, presents several strong batteries, being the haven of the town of Caracas; but the ship road is dangerous, while the highway between the port and capital passes over a mountain defended by two forts. Cumana is of difficult access, and might present a defence of about five thousand men. The isle of Margarita has little attractive, a poor soil being only productive of cotton; there is however a small garrison. After passing Cumana, and doubling the cape of Paria to the S. E. there is no haven except that of Guiana, or St. Tomé, on the great river Orinoco. A debarkation on the coast might be however easily effected; and the troops might proceed, while the ships by attacking the forts would distract the military operations. By the estimate of Depons there is in the Caracas a regular regiment of 918 men, while about four hundred troops of the line are stationed at Maracaibo, a hundred and fifty at Cumana, as many at Guiana, and seventy-seven at Varinas. Their artillery is served by a company of one hundred, besides militia at each of these stations. The militia seems, by the general calculation, to amount to about eight thousand, but might be augmented during war; the total armed force is, by our author's computation, thirteen thousand and fifty-nine.

Church.

In Spanish America there are three tribunals of the inquisition, at Mexico, Lima, and Carthagen. The index of books prohibited by the Spanish inquisition, as printed in 1790, contained five thousand, four hundred and twenty authors, and many of the noblest productions of modern genius. In the Spanish colonies the king is head of the church; and the annats of the bishops now extend to the receipt of an entire year, but payable in the course of six years. The morals of the clergy, particularly the curates, seem to be amended since Dr. Robertson wrote his excellent history, in which they are so strongly reprobated. There are many missions, particularly that of Guiana; which has more than forty villages between the Orinoco and Cape Nassau, and between the sea and the river Caroni. The missionaries certainly deserve great applause, not only for their zeal, but for their beneficence, in teaching

industry and the arts of life: the pay of each is only from 150 to 200 dollars a year, but the capuchins of Guiana are distinguished by their wealth in herds of cattle, said to amount to more than a hundred and fifty thousand, covering a great extent of country. A new ordinance of 1802 reinforced the former against death-bed donations to the church; and few or no monasteries have been founded in modern times in any part of the Spanish possessions: but the churches are maintained with laudable care, are always decent and sometimes elegant. It is however to be regretted that they serve as asylums for criminals, an odious abuse now confined to Spain and Italy.

While the line of mountains along the coast presents gneiss, granite, and other barren rocks, with the singular circumstance of rivers that rise near the sea and flow inland, in the interior the cultivable soil of the plains, exposed to the solar heat, only presents pasturage for bees, horses, and mules; and the vales are of all other parts the most fertile. The cacao or chocolate tree dreads the rays of the sun, and is protected by trees of taller growth. To this main article of cultivation indigo was added in 1774 by a worthy clergyman; and cotton in 1782. The sugar cane of Otaheite began to be tried in 1796, but is found of little advantage, as though larger, the juice is not of equal strength. Tobacco forms another article of culture.* Yet with all these rich products few planters are worth more than four or five thousand dollars a year; and the French island of St. Domingo used to produce ten-fold the quantities yielded by all the provinces of Caracas. The high interest of money; pious legacies of an yearly amount whatever be the crop; the habit of residing in towns; the foolish ambition of idle offices, and the consequent contempt of industry and agriculture; and above all, according to our author, the want of a sufficient supply of negroes, are the causes of this deficiency. A board of agriculture would

* Among the products of Venezuela, Estalla, xxiii. 128. mentions *maiz*, plantains, yucas, potatoes, *curas*; and *guanes*, a kind of root so enormous as sometimes to weigh twenty-five pounds, and may be eaten for many days without spoiling. Alcedo has given an account of the *ignam*, which is also found in Africa; the size seems to depend on the richness of soil, it is of a dark purple colour approaching to black, and the substance resembles the potatoe: It is multiplied by cutting the top into four parts, and planting them at the distance of three or four feet, and the root is ripe in six months.

PRODUCE. be of supreme utility, and might even assist the Royal Audience, by judging in a summary way the little law suits on irrigations, encroachments, the pay of workmen, the treatment of slaves, which at present occupy half its attention. Bouguer had long ago explained what is confirmed by our author, that the Spaniards and creols neglect the arts of industry; some miserable office or paltry honour, a cross of knighthood, occupy all their attention, while a few are in chace of the titles of Castile, aspiring to be marquises, counts, or barons.

**Company of
Caracas or
Guipuscoa.**

From the deficiency of the produce it may be judged, that the commerce of Caracas is not considerable. In June 1728 industrious Biscayans founded the company of Guipuscoa, which was to trade with Venezuela, and thus obviate the contraband traffic with strangers. Their general assembly was held at St. Sebastian; and the trade was conducted with wisdom and spirit, till, corrupted by wealth and avarice, the company itself entered into the contraband trade with the Dutch of Cura-

Commerce.

zoa, which they were instituted to prevent. At length the celebrated ordinance of free commerce, 12th October 1778, was issued with supreme prudence, and followed with surprising success. The *great* ports are Guayra and Porto Cavello, as regulated by an ordinance of 1798, while the others have inferior privileges. In 1796 there arrived at Guayra forty-three vessels of various sizes, which imported more than to the value of three millions of dollars, the customs exceeding two hundred and eighty thousand. The chocolate of Caracas only yields in reputation to that of Soconusco in Guatemala. Cattle and mules also form an article of export. From the village of Pao in Cumana to Merida, that is a space of more than a hundred and fifty leagues, E. and W. by a breadth of forty, there are pastures more or less considerable of horses, cattle, and mules. The mules, in particular, are exported to the West Indies, to the annual amount of ten thousand; the price and freight being about four hundred thousand dollars. The breeding of cattle having declined, they may be had at the pastures for about ten shillings a-head. During the war of the French revolution, the Spanish government was obliged to permit, 1797, a part of the trade with the colonies to pass into the hands of neutrals; to the loss indeed of her navigation, but the treasury received the customs, and the colonist was enabled

abled to sell his products. Our French author complains that the English COMMERCE. during that war, even protected the Spanish vessels; and while the ports bore Guadaloupe, Jamaica was the real destination, so that sometimes eighty Spanish ships might be seen, with their colours displayed in the port of Kingston: and since the perdition of St. Domingo, Jamaica has become the general magazine of all the Spaniards around the gulph of Mexico. But the French can only blame their own want of prudence, which occasioned the ruin of a flourishing colony. The exports of Caracas in cacao, indigo, and coffee, from 1796 to 1800, fell short by one half, or nearly six millions of dollars, of the sum of the four preceding years; a circumstance, by our author's account, solely arising from mismanagement.

The revenues since 1777 have been administered by an Intendant of REVENUES. the Finances, whose authority extends over all the provinces of the government. The Intendant is named for five years, and he is independent. He directs the economy of the revenues, inspects the contracts of the administration, and orders payments from the treasury of Caracas. In litigious cases, he is assisted by a lawyer, as assessor; and his salary is equal to that of the governor; but his share in contraband captures, and his other emoluments, double the appointment. There is also a tribunal of accounts. The branches of taxation are explained at great length by our author. No mines are explored in these provinces, except one of copper at Aroa, which is little worked. More singular articles of revenue arise from cock-fighting, and from the monopoly of guarapo, an intoxicating liquor arising from the fermentation of coarse sugar and water, of universal use in the Caracas, as the *pulque* is in New Spain. The papal bulls form a lucrative branch; and the purchaser of two is entitled to double favour, and the repeated pardon of his sins. They are sold according to the rank of the purchaser, and if bought at an inferior price, are of no avail. They cost from fifteen dollars to a quarter of a dollar, and are printed on coarse paper, with the necessary forms. Since 1779 tobacco had become a royal monopoly, and in 1802 the product was considerable. The receipts of the revenue may be about 1,200,000 dollars, but it is generally exceeded by the expences.

CITIES AND
TOWNS.

Caracas.

Caracas, the capital, is a considerable town, on the little river of Guayra. Its elevation of four hundred and sixty fathoms above the sea, cools the temperature, so that spring may be said to be perpetual. During winter the thermometer of Farenheit marks from 52° to 76° , and in summer from 69° to 85° . It is built in a valley, of about four leagues in extent, among the mountains of the great chain, which runs along the sea from Coro to Cumana. The site is steep and irregular, from the northern heights to the river Guayra, which bounds the city on the S. Water is also amply supplied from three rivulets which join the Guayra. The streets are strait, paved, directed towards the four points of the compass, and at the usual distance of a *quadra*, or three hundred feet from each other. The chief square occupies the same extent of a *quadra*, or nearly three hundred square feet. It is well paved, and is the general market; while the cathedral decorates the eastern side. There are five or six other churches, all accompanied with their usual squares. The houses are large and handsome, some of brick, but generally of masonry laid in moulds, after the Roman manner, as revived by Tardif in 1757, for constructions in marshes, the sea, &c. The best are of mortar mingled with gravel, formed in moulds, five feet long, and three feet high; and the houses have all the appearance of stone. They are decorated with handsome mirrors, curtains of crimson damask, antique gilt chairs and sofas, gilded beds, covered with silk counterpanes, and pillows covered with fine muslin, adorned with lace. The nuptial bed in particular is reserved for this parade. The archbishopric of Venezuela was erected in 1803, extending from the river Unari to Coro; on the E. it is bounded by Cumana, on the S. by the Orinoco, and on the W. by the bishopric of Merida: the income may be about 60,000 dollars. Festivals and processions abound, as in all Spanish America: the theatre is miserable, the admission costs sixpence, and the declamation resembles the monotonous chant of a child of ten years repeating a lesson. The other amusements are chiefly tennis and billiards; small gamblers are punished, but the great protected, as usual. The population of the city of Caracas, according to an enumeration made in 1802, is between forty-one and forty-two thousand souls, of which the whites form about one quarter. There are six titles of Castile, namely, three marquises,

marquises, and three counts; but every white person regards himself as noble, and a creol esteems nothing degrading except industry. The most industrious inhabitants are those from Biscay, Catalonia, and the Canaries. The women, though small, are of a beautiful complexion, with tresses of a jet-black. About two hundred unfortunate creatures draw from the vice of the evening the sustenance of to-morrow, and are known by their white petticoat and cloak, and silk bonnet decorated with flowers. The university of Caracas was founded in 1682, and improved in 1727; the degrees of bachelor, licenciate, and doctor are solemnly conferred, the oath of each degree being to support the immaculate conception of the Virgin; neither to teach nor practise regicide nor tyrannicide; and to defend the doctrine of St. Thomas Aquinas! In 1802, the students were four hundred and sixty-six, future priests and magistrates; and who may, with more wisdom, not aspire to defend the immaculate conception, nor St. Thomas. The Spanish sobriety and phlegmatic character render quarrels very rare. Silence reigns in the streets of Caracas, and three or four thousand persons will issue from a church without making more noise than tortoises walking on sand. The Andalusians are here noted for a spirit of vengeance and assassination, little known among those from the northern provinces. Beggars abound, and their indolence is continued by mistaken piety. There is a regular post to Maracaibo, Porto Cavello, Santa Fé, Cumana, and Guiana; including the towns and villages on the respective routes. Forty-two days are occupied in passing from Caracas to Santa Fé; from Barcelona to Guiana thirty days are reckoned. Guayra, the haven of the city of Caracas, is rather an inconvenient road, and the water is bad.*

Porto Cavello seems a commodious harbour, and the population may be 7500; but the situation is unhealthy, and extremely dangerous to the crews of foreign vessels. The marsh, which occasions this mortality, might be drained for twenty thousand dollars! Valencia contains about eight thousand inhabitants, and its advantageous situation may lead to

* Our author Depons, shews on this occasion a risible ignorance. He says that the water passing through beds of sarsaparilla acquires an antisyphilitic quality! Sarsaparilla belongs to the vegetable, not to the mineral kingdom.

great

OTHER
TOWNS.

great future advantages. Maracay is a beautiful new village, in the rich vales of Aragoa, famous for the culture of chocolate. The industrious inhabitants, mostly Biscayans, have been computed at more than eight thousand, and the vicinity is crowned with numerous plantations of cotton, indigo, coffee, and grain. Tulmero, in the same vales, is another handsome town. Victoria contains seven thousand eight hundred souls. Coro stands in an arid sandy plain, full of *cacti*, nopals, and Indian figs; it has some commerce with Curazao, and a population of about ten thousand. Carora, thirty leagues to the S. is also in an arid soil; but there is abundance of deer, whose hides are dressed, leather being the chief fabric: population six thousand two hundred. Barquisimeto is a thriving town, with about eleven thousand three hundred souls. Tocuyo contains more than ten thousand, though the inhabitants have a singular propensity to suicide. Guanara may contain twelve thousand three hundred. In 1804 Calabozo, between Caracas and the Orinoco, might already boast of a population of four thousand eight hundred. Pao is remarkable for herds of cattle.* The river of the same name, passing N. to S. formerly fell into the lake of Valencia, but afterwards assumed its present direction to the river Apuri, so that a communication might easily be opened between Valencia and the Orinoco, a distance of one hundred leagues. San Felipe is a regular town, with about six thousand eight hundred inhabitants. Nirgua, built in the expectation of mines, has been abandoned to the Zambos, or offspring of negroes and Indians; a race so remarkable for crimes, that of ten which are committed, eight may be ascribed to them. This mixture is radically bad, while the children of a white by an Indian woman, who are of a pale complexion, are always delicate, lively, good, and docile.

Cumana forms a delegated government, said to contain two provinces, Cumana and Barcelona, which last however has never formed a province, but being included in the grant to the Wellers, was esteemed a part of Venezuela. The town of Cumana is the most ancient in the Caracas, having been founded in 1520, on a sandy soil, about a league

* There are two towns of this name.

from

from the sea. In the last war Emparan, the governor, opened the port CUMANA, &c. to neutral ships, and his conduct met with the approbation of his sovereign. The heat of the climate is very great, yet the population is computed at twenty-four thousand, and is thought to be on the increase. It is however subject to frequent earthquakes, which Humboldt supposes to proceed from the volcanoes of Cumucuta, which pour out sulphur and hot water. The caverns of Cuchenaro emit an inflammable gas, which shines in the night, especially after rains, to the height of one hundred fathoms. The population of Cumana is chiefly composed of creols, who are industrious, and fond of their native place. The great article of trade is salted fish, which is sent to Caracas and the Windward Islands; the industrious inhabitants being from Catalonia and the Canaries. Cariaco contains about six thousand five hundred persons. Barcelona was founded in 1634, on a plain, one league from the mouth of the river Neveri; the population is computed at fourteen thousand; but the town is, or was, very disagreeable, and only noted for breeding swine. There is another town called Pao, about forty-five leagues from Barcelona. The isle of Margarita is little remarkable, except as a military station for the invasion of the Caracas. The chief town is Assumption, near the centre of the island.

The town of Maracaibo is in the province of that name, which is Maracaibo. bounded on the W. by the viceroyalty of New Granada; the last province of which in the N. E. is that of the river Hacha. On the S. the province of Maracaibo borders on Varinas. The eastern shore of the lake of Maracaibo, is arid and unhealthy; and on the W. the land only becomes fertile about twenty-five leagues to the S. of the town, an excellent soil prevailing on the southern banks of the lake. The town is on the western shore, at the distance of six leagues from the sea, on a sandy situation, and in a hot and dry climate, chiefly felt from March to October; but in July and August the air seems to proceed from an oven. The only antidote is to bathe in the lake; and endemial disorders are unknown. The thunder storms are terrible; and if they fail, earthquakes are sure to follow. Most of the houses are meanly covered with reeds, and there is no water but that derived from the lake, which is healthy, though not pleasant, especially in March and April, when the

MARACAIBO.

strong breezes impregnate it with sea-spray. According to an enumeration in 1801, there were about twenty-two thousand inhabitants; and they were increased by the Spanish refugees from St. Domingo. The slaves do not exceed five thousand. The habit of sailing on the lake encourages the spirit of navigation, and many of the natives become seamen. Even in the dry savannas they contrive to feed numerous herds, and the youth are celebrated for intelligence and ingenuity; but the inhabitants rather noted for want of probity. The women are fond of the harp, which resounds in the streets in the evening. There is only one church, and a convent of Franciscans. Merida is the seat of a bishopric, created in 1782, and the inhabitants are computed at more than eleven thousand.* The province of Varinas sometimes assumes the name of Merida; but by the map of La Cruz, New Varinas is in the province of Caracas; while by that of Depons, which seems more correct, Merida is in the province of Maracaibo, and Varinas near the centre of the province so called.

Merida.

Truxillo.

Truxillo was a flourishing town till it was ravaged by the buccaneers in 1678, since which event the population has greatly declined; and Truxillo is chiefly noted for sweetmeats and confections made by the women. In 1787 the town of Varinas was detached from the government of Maracaibo, and chosen for the seat of a separate government. As it is easily accessible by the navigable rivers which join the Orinoco, a militia was appointed for its defence in 1803. The tobacco of Varinas is highly celebrated, though not equal to that of some parts of Cumana. The town of Varinas has a population of 10,000.

Varinas.

Natural
Geography.

The temperature of this country, which is in the ancient torrid zone, chiefly depends on the chains of mountains. A branch of the eastern Andes of Quito passes along the N. of the province of Varinas; and

* Merida stands near three rivers, the Chama being the largest. It may be said every day to enjoy the four seasons of the year; being in the vicinity of the snowy mountains, there are twelve hours of winter, from six in the evening till six in the morning; four of spring, till ten; six of summer, till four; two of autumn, till six. Near the city is the mountain of Flowers, with a beautiful lake, so called from the numerous flowering shrubs which adorn it, and are haunted by birds of the most beautiful plumage. *Essai*, xxiii. 122.

borders the coast from Coro, or rather the N. of Valencia, as far as **MOUNTAINS.** Paria; while another chain called the Bergantin mountains, passes further to the S. These chains are mostly habitable, being of little height, though from ten to fifty leagues in breadth. The highest peak is the Picacho, of about seven thousand feet. From the account of Humboldt, these mountains are chiefly of granite and gneiss, intermingled with talcaceous schistus, and chloritic schistus, adularia, limestone with mica, rock crystal, a green primitive rock, quartz, galena, titan, plumbago, clay, potters' clay, &c. In the interior of Cumana there is a remarkable cavern called Guacharo, famous among the Indians; for being of immense extent, and serving as a habitation for thousands of a kind of nocturnal birds, a new species of goat-sucker, the savages conceive these birds to be the souls of their ancestors, and visit the cavern with great ceremony.

There was formerly a mine near Nirgua. At present only copper **Mineralogy.** is explored at Aroa, in the jurisdiction of St. Felipe. These mines are rich and abundant; and in 1801 one hundred and seventy-one quintals were exported from Porto Cavello. Mineral waters abound in these provinces.*

Spring and autumn are unknown, and there are only summer and winter, or more properly rainy and dry seasons; during the former the rain generally falls for three hours in the afternoon, as in Mexico; before 1792 thunder storms were more frequent, but since, the rains have been more abundant. Since the thunder have ceased, earthquakes have become more common. The botany of Caracas little differs from that of New Granada. The lake of Maracaibo derived its name from an Indian cazic who commanded there. This sea of fresh water is nearly circular, and

* The caguars (American tigers or leopards) abound in Caracas, and are said to be the more fierce in proportion as the spots of their skin are smaller. Perhaps they diminish with age. There are also many pumas, or American lions, with bears or rather ant-eaters, dantas or tapirs, deer, *paquiras*, and American rabbits. Among the plants is the *tacamajaca*, said to relieve head aches. Estalla, xxiii. 106, 107, who says that there are mines of tin in different parts, discovered by Oviedo, a citizen of Barquisimeto; and adds that, it is employed in the Spanish founderies of artillery. He also mentions veins of *axul* or azure, equal to ultramarine; and the same substance is mentioned by Ulloa in his account of Peru. Do they mean Prussian blue or cobalt, which, as yielding smalt, was formerly called blue-stone?

LAKES.

by the latest maps about 90 g. miles in diameter. It is navigable for large vessels, as already mentioned in the account of the town of Maracaibo. It is generally fresh till its entrance into the sea, but during the northern breezes is salt as far as the town. On the N. E. of the lake, at a spot called Mena, there is an inexhaustible store of mineral pitch, which being mixed with tallow serves to tar the ships. In the night the bituminous vapours, especially during the great heats, dart like lightning from this spot, forming what is called the lantern of Maracaibo, because they serve as a pharos to the Spaniards and Indians, who navigate the lake without a compass or nautical skill. The shores being unhealthy, the Indians build their hovels upon stakes of hard wood, whence the name of Venezuela or Little Venice. Four such villages still exist on the eastern side of the lake; they have a church on the water served by a curate; and so fervent is religious zeal, that, though he seldom survive the dangerous climate above six months, yet a successor is never wanting. These Indians chiefly live on fish; and it is remarkable, that they take wild ducks by concealing their heads in calabashes, as practised in China. The western side of the lake is fertile; and the further north the air is the more salutary.

Lake of Valencia.

The lake of Valencia offers a more pleasant prospect than that of Maracaibo, and is more useful, though far inferior in size, the banks being fertile land, and enjoying a delicious climate. By the latest authority, it is about ten Spanish leagues, or forty B. miles in length, by three and a half, or fourteen B. miles in breadth; but Depons, from his own observation says, that the length from S. W. to N. E. is thirteen French leagues and a half, and the greatest breadth four. Except the western side, it is surrounded by mountains; and receives on all sides twenty rivers or rivulets. It is found to be lower in the middle, where it is supposed there is a subterranean tunnel of evacuation. The eastern side is occupied with five plantations of tobacco on the king's account, which occupy fifteen thousand persons; and the other sides are equally cultivated, while the banks present a perpetual verdure. This lake is also adorned with several isles, some of which are inhabited. The water is of a soapy kind, ascribed by our author to the quantity of animals and vegetables, which there rot and decompose. Iguanas, a monstrous

kind of lizard abound, and in spite of their unsightly appearance afford LAKES.
a delicious food.

After the grand Orinoco in the S. the chief rivers are the river Apuro Rivers.
or Apuri on the W. joined at its confluence by the river of the Portuguese Woman, or more shortly the *Portuguesa*, which is followed by the Guarico. In the middle is the Unari, a considerable stream, which divides Venezuela from Cumana; and on the E. the Guarapicha, which is navigable by boats for a considerable space. The tides on the northern coasts between the capes Vela and Paria are almost insensible; while on the eastern shores as far as Dutch Guiana, they are so strong as to enter essentially into the calculations of the mariner. The trade winds between N. E. and E. though constant on the sea, upon the shores only blow from nine or ten o'clock till the evening, when they are replaced by an opposite wind or land breeze. But this rule is not without exceptions. Vessels must be tarred every three or four months, else they are corroded by the worms.* It has already been mentioned that Porto Cavello is by far the best and safest haven.

* Might not a mixture of arsenic prevent this pestilence?

This article must not be dismissed, without some account of SPANISH Spanish
GUIANA Guiana.; for such is the appellation finally adopted for the province, called in some maps New Cumana or New Andalusia. The large and celebrated territory of Guiana is bounded by the river Orinoco on the N. and W. the line afterwards bending on the E. of the Casiquiari, where is the fort of St. Carlos, to the great river Negro, which divides Guiana from Northern Amazonia, or by a more laudable appellation Northern Colonna. The southern boundary of Guiana is strictly the great river Maranon; the part of Brazil on the N. of that river, having begun to assume the more proper name of PORTUGUESE GUIANA. The eastern boundary is the Atlantic Ocean. This interesting country is even at present little known; and contests have arisen concerning the course of the most important rivers. The French, Dutch, and Portuguese possessions in Guiana, are reserved for separate descriptions.

Spanish

BOUNDARIES.

Spanish Guiana is bounded on the S. E. by the Dutch and French possessions, on the S. by the Portuguese, the line of demarcation passing nearly parallel with the lake of Parima and the great chain of mountains called Tumucurag. The precise western boundary is the western mouth of the river Yupura, thence proceeding almost due north till it join the northern limit. But when the French, by the treaty of 1801, extended the western frontier of their possessions to the Rio Blanco, it appears to be indicated, that this river forms the boundary of Portuguese Guiana, which would be more proper than an arbitrary line. The equator was the original boundary, but the Portuguese have extended their possessions thirty two leagues further to the N. for there are situated the isle St. Joseph, and the mountain Gloria del Cocui, regarded as the present boundaries.* The Spanish fort of San Carlos, N. lat. $1^{\circ} 53'$, is intended to prevent new usurpations, and to recover if possible the lost territory; which is difficult, as the Portuguese have settlements in a fertile country, and the convenience of transport by the Marañon, they being more than 300 leagues from the sea. From this reasoning of Depons, it would appear that the recent western boundary of Portuguese Guiana extends to the great river Negro.† The town of San Tomé, or Old Guiana, was founded in 1586, on the southern bank of the Orinoco, fifty leagues from its mouth: but being exposed to repeated attacks and insults, was transferred in 1764, to a more safe and remote position, about ninety leagues from the sea. There is here a special governor, dependant on the captain general of Caracas; and it is the seat of a bishopric. The houses have terraces, where the inhabitants sleep during the great heats. In 1803, the whole tythe of the vicinity was 4000 dollars. Trade is carried on by a few Catalonians, in thirty four small vessels. The city had better have been placed nearer the sea, and the ferocious Caribs expelled, which might be accomplished in two months by three thousand troops.

Town of Guiana.

Orinoco.

The most remarkable feature of Spanish Guiana, is the course of the river Orinoco. In the year 1800, the Prussian traveller, Humboldt, resolved to explore the reported truth of the junction of the Orinoco with the

* Depons, iii. 248.

† The boundaries assigned by Depons to Spanish Guiana, are on the E. the Atlantic, from the Cape of Nassau, to the mouth of the Orinoco, a shore of only thirty leagues: on the N. and W. the Orinoco, till it receive the Guaviari, where it is bounded by the Portuguese possessions.

Marañon,

Maranon, by the great river Negro. He entered the Orinoco by the river ORINOCO. Apuri, and after many difficulties reached the fort of San Carlos, towards the Portuguese frontier. From this fort he returned to the Orinoco by the river Casiquiari, a very strong branch of the Orinoco, which communicates with the river Negro. The force of the current, the prodigious numbers of musquitoes and ants, and the want of population,* render this navigation fatiguing and dangerous. He entered the Orinoco by the Casiquiari at $3^{\circ} 30'$, and remounted the current of the Orinoco to Esmeralda, the last Spanish settlement in that quarter. This remarkable communication had been marked in his map by Samson de Fer, geographer to his catholic majesty in 1713, and confirmed by the able Condamine. As the mind of a jesuit is naturally warped by constant pretensions to believe what he does not, so that, by a necessary consequence, truth is to him a non-entity, it is no wonder that Gumilla denied this junction in the strongest terms; and has distorted the source of the Orinoco, as the jesuits of Quito did that of the Maranon, and the jesuits of Paraguay that of the Parana. These great and striking examples, may evince that little dependance can be placed on the testimony of men, engaged by their very vocation,† in the defence of falsehood; and, it is no wonder that the chevalier Forbin declares, in his account of Siam, that he could no where find in that country, what had been reported by the jesuits. The mouths of the Orinoco are of dangerous navigation, and require an expert pilot. Seven of them are navigable for large vessels; but the chief is the great mouth about six leagues in width, being the most southern, and in the direct course of the river. The Isles of the Orinoco, (or rather its Delta, which is of prodigious extent,) are possessed by the Guaranos and the Mariufas, two independent tribes of Indians.‡ The river Caroni running from the S. to the N. for nearly one hundred leagues, is celebrated in the expedition of Raleigh. It preserves its clearness for half a league after it joins the Orinoco, having mostly run over a fine black sand. The beauty and

* I think that upon this occasion he asserted that he travelled 300 leagues, without seeing a human countenance.

† " 'Tis my vocation, Hall."—Shakspeare.

‡ Particular directions for the navigation of the Orinoco, may be found in Depons, iii. 274, &c.

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Maranon,

Orinoco.

grandeur of the banks of the Orinoco surpasses all description. Forests of the most superb verdure are crowded with birds and monkeys of the most various and brilliant colours; and sometimes immense plains form an horizon of twenty or thirty leagues. Devotion rises in the most unfeeling breast, on seeing the wisdom and design of the great Creator, evidenced by this primitive majesty of nature, unviolated by the art or industry of man. The annual inundation of the Orinoco begins in April, and ends in August; and in the northern part sometimes extends for twenty or thirty leagues, during a length of two hundred. This proud extent, it will retain for the whole month of September. The usual swell at San Tomé is of thirteen fathoms. In October the flood declines; and the river is lowest in February. The cayman, which is strictly neither an alligator nor a crocodile, is a terrible inhabitant of the Orinoco. The *chiquira*, or river sheep, the *lapa*, or aquatic dog, and the *manati*, or river cow, are amphibious animals. Depons computes the population of Spanish Guiana at only 34,000, including all descriptions.* His discussions concerning the fabulous city of Manoa or El Dorado are of little moment, as it is now known that *Manoa* only signifies a *lake* or a *river*; and the name originally belonged to a river which runs into the Ucaia, and shall be mentioned in the account of the unconquered countries. In the want of precise ideas, Guiana was confounded with the country immediately to the E. of the Andes, and Manoa must be classed with the great empires of Enim, and Paititi, now Colonna or the Land of the Amazons; with Quivira another fabulous empire on the W. of New Mexico; and other inventions of interested adventurers, who sometimes imposed on the credulity of the Spanish viceroys, and their ignorance of geography.

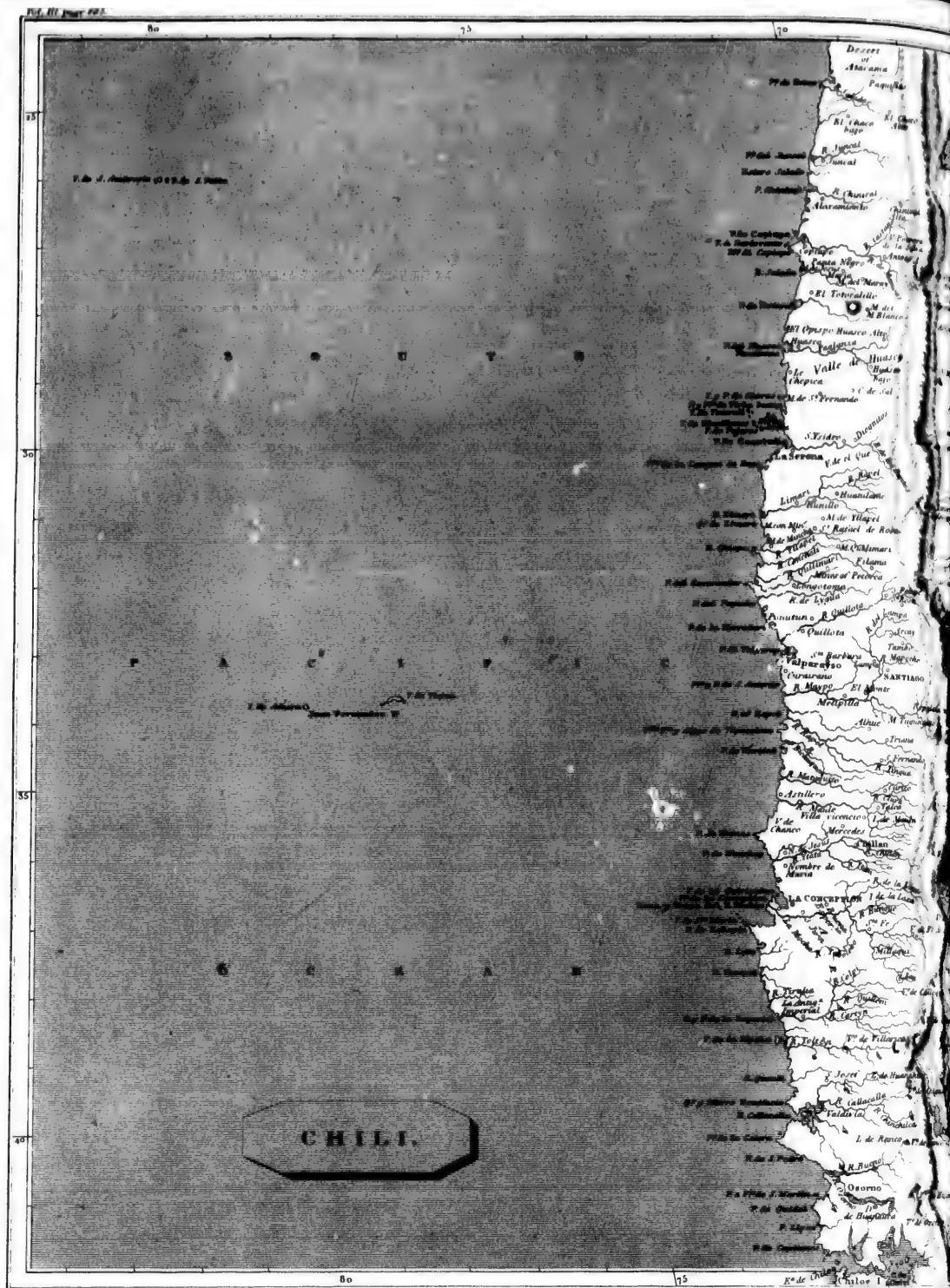
El Dorado

* Estalla says, xxii. 286, that the government of Guiana formerly depended on that of Caracas, but that it had been lately annexed to the viceroyalty of New Granada. From the work of Depons, it would appear that he is mistaken. He adds, there are four towns in Spanish Guiana, San Tomé or Guiana, Ciudad Real, Real Corona, and San Fernando de Maypures; with three villages Eupata, Borbon, and Esmeralda; the seven places containing 2463 inhabitants; with forty three missionary villages, containing 11,148 Indians.

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CHAPTER IV.

GOVERNMENT OF CHILI.

Origin of the Chilese.—History.—ARAUCANS.—Dress.—Manners.—Government.—War.—Religion, &c.

SPANISH CHILI.—Government.—Cities.—Commerce.—Natural Geography.

THE works of Molina concerning this interesting country may be ORIGIN. regarded as excellent models of chorography: and scarcely of any distant region a description exists so exact and complete. He shall therefore be selected as the chief guide in the following short abstract, though a few occasional observations by other recent authors may be interspersed. * Some of the indigenes of Chili believe that they were produced in the country, while others assert that they came from the north or the west. Our learned author inclines to think that the Chilese, being generally of a mild character, perhaps proceeded from the isles of Polynesia; and a comparison of the languages might be curious. They are of a brown, tinged with red or copper colour, like the other American tribes; while the Polynesians are generally olive, a tint decidedly Asiatic. One tribe, however, in the province of Boroa, is fair. The Chiletic language is remarkably rich and harmonious; and from our author's vocabulary it would appear that there are few natural objects, or even abstract terms, which may not be expressed in the native idiom. It differs radically from the other American languages, not less in the words than in the structure. Some few words however seem to be from

* Molina *Saggio sulla Storia Naturale del Chili*. Bologna, 1782, 8vo. *Saggio sulla Storia Civile del Chili*. Bologna, 1787, 8vo.

ORIGIN.

the Peruvian or Quechua, which is not surprising considering the contiguity of the kingdoms. *

History.

Till the fifteenth century the history of Chili is buried in total obscurity; but about the middle of that century it begins to dawn in the Peruvian annals. The Peruvian empire then extended from the equator to the tropic of Capricorn, or confines of Chili, a delicious country extending for more than twelve hundred miles along the Great Ocean, flanked and protected by the vast belt of the Andes, which sends forth copious streams to water its fertile fields; while the envied soil at the same time abounds with gold, silver, and other valuable productions. The native Chilese were then divided into fifteen tribes, each ruled by its *almen* or chief. The Inca Yupanqui who seems to have reigned about 1450, ordered an expedition against Chili, conducted by a prince of the blood, while he himself remained in the frontier province of Atacama. Some tribes were rather won by persuasion, than subdued by force or fear; and on a further progress the Peruvian army was totally defeated: but the country as far as the river Rapel, where there still exists a Peruvian fortress, acknowledged the dominion of the Incas. Thus, on the arrival of the Spaniards in America, a part of the Chilese were subdued, while the other portion remained free.

In both these divisions the manners were the same; and the Chilese may be said to have advanced from the pastoral state of society to the agricultural. Besides maiz they cultivated several native plants, as potatoes, yucas, and others. † They also multiplied their little rabbits, and native camel or rather tall sheep, which supplied them with flesh, and wool to clothe them. According to some traditions they had even hogs and hens, the former a frequent animal in Polynesia, the latter probably the Turkey, an American fowl, or that bird which resembles the pheasant, which might probably be tamed as partridges are in Asiatic Turkey. Such was their dominion over the animal creation, though they might have added the *guanaco*, the *pudu* a kind of wild goat, and various birds which abound in their country. Canals to water their fields were not unknown, but their instruments of agriculture were mean

* Storia Civile, p. 12.

† Ib. 16.

and cumbersome. Their villages consisted of huts, only within view HISTOR of each other, like those of the ancient Germans; and it would seem that their chiefs arose to that dignity on account of their wealth, as the word *ulmen* signifies a rich man. Their power was directive and not coercive, and the right of property was admitted: the field belonged to the cultivator, and was transmitted to his children. Their looms, though of rude fabric, somewhat resembled the European; and they were no strangers to the art of making earthen ware. They extracted from their mountains gold, silver, copper, tin and lead; and of a mixture, approaching to bell-metal, formed axes, and other rude instruments, found though rarely in their sepulchres, they being generally of basalt. Our author even asserts that they had a term for iron, and had weapons made of that metal, a circumstance unknown to all the other tribes of America; but this, by his own confession, seems dubious. * They were acquainted both with fossil salt, and that drawn by heat from sea water; and their dyes were fixed by the *polcura*, an aluminous stone used as a mordent. From one of their plants was derived thread for cords and nets; and they had canoes of different structures. In numbers they could express one thousand, and they had *prons* or the Peruvian *quipos*, a bundle of threads of various colours, with different knots to express contracts or events. The celebrated Araucanos may be considered as the genuine representatives of the ancient Chilese; and the account of their manners will supply any deficiency in the present description.

After the conquest of Peru the Spaniards under Almagro first attacked Chili in 1535; but met with little success till their general Valdivia, in 1541, founded Santiago, which has since remained the capital. After detailing the events of those wars, our author proceeds to give an account of the Araucans, who have so vigorously defended their country against the further progress of the Spaniards, and who are better known in Europe by the epic poem of Ercilla than by the records of history. The description of this singular nation might have been transferred to that of the Native Tribes and Unconquered Countries; but as they possess nearly one half of Chili, and their history is intimately in-

Araucans.

* Storia Civile, p. 25.

HISTORY. terwoven with that of the province, the arrangement may appear more connected by introducing here a short view of their geographical position, character, and circumstances.

The Araucans inhabit a beautiful tract of country extending from the river Biobio N. to that of Valdivia S. bounded on the E. by the Andes, and on the W. by the ocean. The name is derived from the province Arauco, which, though the smallest of their state, has, like that of Holland, become the leading name of the country and nation; but they also voluntarily receive the appellation of AUCAS or FREE MEN. Though they do not pass the usual size, they are in general robust, well formed, and of a truly warlike aspect. Their complexion, though copper, seems to be more clear than that of other Americans. The face is nearly round, the eyes though small, lively and full of expression, the nose rather flat, but the mouth well made, with white and uniform teeth; the leg muscular and elegant, and the feet small and flat. They have naturally very little beard like the Tatars, and extract it with great attention, despising the beards of the Europeans as marks of barbarism. They also carefully eradicate this natural vegetation from all the other parts of their bodies. The hair of the head is black and copious, and bound up in a knot; and like the Franks they esteem long hair a mark of honour. The women are often handsome, especially in Boroa. Endued with a strong constitution, and free from sedentary or careful operations, they rarely become grey before the age of sixty or seventy; nor bald before that of eighty: and not a few exceed one hundred, with the teeth, sight, and memory complete. * The soul corresponds with the vigour of the body. Intrepid, and full of fire, patient of the fatigues of war, prodigal of their lives in defence of their country, above all lovers of liberty, which they value above their health and soul, jealous of honour, courteous, hospitable, faithful to their contracts, grateful for benefits, generous, humane towards the vanquished. These noble qualities are however obscured with vices peculiar to their nearly savage life, destitute of education and the use of letters; drunkenness, sloth, presumption, and a contemptible pride

* Storia Civile, p. 53.

which

which leads them to despise all other nations. Were European manners History, and knowledge introduced, this people might deserve universal esteem ; but the obstacles seem invincible.

As a warlike nation the Araucans prefer a short dress. It is wholly Dress, of wool, consists of a kind of shirt, a doublet, tight and close breeches, and a mantle, which, opening in the middle to admit the head, reaches to the knee. This mantle is the *ponch* of the American savages, and is often adorned by the women : and being found very convenient for riding, and as a protection against the wind and rain, has been adopted by the Spaniards of Chili, Peru, and Paraguay. While the general dress is blue, the mantle among people of condition is sometimes white or red, and is commonly furrounded by a strip of various colours, representing flowers or animals ; and it is hemmed with a neat fringe. The head is only covered with a kind of woollen ribband, resembling the diadem of ancient sovereigns. It is taken off or raised a little in saluting each other ; and when they go to war is adorned with beautiful plumes. Around the body there is a sash of wool generally well wrought. While the feet of the commonality are naked, the rich wear woollen boots, with sandals of dressed leather. The women are clothed with modesty and simplicity. Their dress is also wholly of wool, and blue, the favourite colour of the nation : it consists of a gown, a belt, and a short mantle fastened before with a silver bodkin or clasp, the gown reaching the feet, but without sleeves, and fastened on the shoulders with broaches of silver. Such is the constant and unchangeable dress, but there are often additional ornaments according to the fancy of the fair wearer. The hair is divided into several tresses, which are negligently left to wanton on the shoulders ; and the head is adorned with false emeralds, or rather with the green stone called *glianca*, which is highly valued : necklaces and bracelets of glass beads, ear-rings of silver in a square form, numerous silver rings on the fingers, complete the decorations of an Araucan lady. As the poorest women wear silver ornaments, our author supposes that if the whole sex were melted, the product might be about 100,000 marks.

Polygamy prevails almost universally ; and the houses are constructed Manner, in proportion to the number of wives whom the master can entertain ;

MANNERS. but the furniture is plain and only adapted for use. Such were probably the houses of the ancient Greeks, when the cazics went with a thousand pirogs to besiege Troy. The habitations are mostly scattered over the country, on the paternal inheritances near the rivers. Cities they regard as prisons; and, like that chief of the noble house of Douglas, they would rather hear the lark sing, than the mouse chirp.

Government. Their political arrangements are worthy of the character of the people. The whole of Araucana from N. to S. is divided into four parallel tetrarchies, almost equal in size, styled by them the maritime, the plain, the upland, and the mountainous. Each of these is divided into five provinces; and each province has nine districts. This exact division approaches to the Polynesian manner, but from such similarities little can be argued. The mountainous tetrarchy is possessed by the Puelches, formerly allies, but now united with the Araucans.* This division being anterior to the Spanish arrival implies no small degree of political refinement. The government is aristocratical, as in fact it must ever be among mankind, whatever name or form it may assume; a mandarine in China, a pasha in Turkey, a demagogue or magistrate in a democracy, being all essentially aristocratical. There are three orders of chiefs, the *Toquis*, who may be called Tetrarchs because there are four, preside over each tetrarchy above described. The word *toqui* implies a judge; and they are independent of each other though confederated for the common good. Next are the *Apo Ulmens* or Grand Chiefs, who govern the provinces; and lastly the *Ulmens* who preside over the districts, but acknowledge no superior except during war. The distinction of a Toqui is an axe of porphyry or basalt. The Apo-Ulmens and the Ulmens carry staffs headed with silver; the former being known by a ring of the same metal around the middle of their staff. All these dignities are hereditary, in the male line, and sole order of primogeniture. Behold, adds our author, the dukes, earls, and marquises, of the military aristocracy of Europe, established from time immemorial in a corner of South America. This new specimen of the feudal system also presents its defects. The Toquis have only a shadow of sovereignty, the power being with the barons, who decide business of

* *Storia Civile*, p. 58.

importance in a general diet, called the *Aucacoyag* or *Assembly of Free men*. This congress is commonly held in a spacious meadow: and, like the ancient Germans, they do not deliberate on public affairs, till they have enjoyed the pleasures of the table. Their laws, preserved by tradition, are called *Admapu*, or customs of the country; but those relative to the aristocracy are the best maintained. No two dignities can unite on the same head: and if a family fail the vassals have a right to elect another. Nor are they attached to the glebe, as in the feudal system, or constrained to any personal service, except during war. Tributes and taxes are unknown, as each chief lives on his own estate; nor are they respected as superiors, but merely as the first among equals. They aspire, as usual with men in authority, to more ample power, but are vigorously withstood by the people. Though many crimes are punished with death, yet a composition may be entered into with the relations. The ulmens are the legitimate judges of their vassals; and *feuds* or private hostilities are not unknown.

War being resolved by the great council, the commander in chief is chosen from the Toquis; but in case of great merit an ulmen, or any distinguished officer, may be appointed. The general in the war against the Spaniards, which ended in 1773, was of the latter description. The commander in chief instantly assumes the axe of stone, the symbol of his authority, which the other toquis lay aside during his dictatorship. All the other chiefs take oaths of obedience; and the people, at other times unruly, become submissive to their military sovereigns. Heralds are sent to the confederate tribes, and even to the Indians in the adjacent Spanish districts, the badges of these heralds being bundles of little arrows bound with a red thread, and their secrecy equals their dispatch. The required number of troops is signified by the general to the tetrarchs, and divided among the apo-ulmens, who require the contingent from each ulmen. As every Araucan is a soldier, all present themselves, and the levy is made with great facility. The army generally amounts to five or six thousand, exclusive of a body of reserve. There is even a body of cavalry, which began to be formed in 1568, that is seventeen years after the first rencounter with the Spaniards; but it was first reduced to a stable form in 1585. Each regiment of infantry is composed

GOVERN-
MENT.

War.

WAR.

composed of one thousand, each company being one hundred. They have all their particular banners; but the general impress is a star, the badge of the nation. The soldiers have no uniform, but wear a leathern cuirass under their usual dress; of this leather, hardened in a particular manner, they also make helmets and shields. The cavalry is armed with lances and sabres; the infantry with pikes, or clubs stuck with spikes of iron. Formerly slings and arrows were used, but experience has taught them the use of close fighting against fire arms. They have not discovered the art of making gunpowder; and when they first saw negroes supposed that the Spaniards made it of their bodies. After an eager struggle a negro was made captive, and was burnt to ashes in this new chemical process. Bosu mentions a tribe in North America who supposing gunpowder to be a seed, wasted their ammunition by sowing a field of it; and after waiting with great patience the appearance of the new crop, philosophically concluded that it would only grow on European ground.

On the march the infantry is mounted, but dismounts before a battle. Each soldier carries his provision of parched maize, which is steeped in water. The camp is well chosen, and guarded by centinels; and if in presence of the enemy by trenches, which are often deep, and lined with thorns. In short there is scarcely a point in war which is unknown; and the celebrated Ercilla, who fought against them at the beginning of the conquest, has expressed his surprise at their skill.* In battle the cavalry forms two wings; and the infantry the centre, in battalions or divisions, the files being composed of a club man and a pike man placed alternately. The toqui addresses a warm discourse to the army, and exhorts them that the sacred flame of freedom, bequeathed by their ancestors, may not be permitted to expire. Advancing with great shouts, in spite of the opposite artillery, they generally attack the Spanish centre, the clubs often making terrible havoc. The booty is equally divided among the captors, no officer, nor even the general, having any preference. The prisoners remain slaves till exchanged or ransomed. Sometimes one is sacrificed to pacify the manes of the slain; but this has

* Araucan. part ii, canto 25.

hardly

hardly occurred during a space of two hundred years. The heart of the unhappy victim was first handed to the general, who sucking a little of the blood, presented it to the officers, who performed the same ceremony. The head was raised on a pike, amid the horrid sound of the war song. A sheep's head was then fixed to the carcase; and a drunken festival was celebrated around. If the skull had not been broken with a club, a cup was formed to be used at solemn banquets, a practice not unknown among the Gothic nations of Europe. Treaties are formed in a kind of council, held in a meadow near the river Biobio. After the war of 1723, a hundred and thirty ulmens appeared, their followers amounting to two thousand. The symbol of peace is a branch of the cinnamon tree; and an Araucan orator discusses, in the Chilese language, the motives of the war, and the means of future harmony. This being interpreted, the Spanish Governor or President answers; and the articles being recited, are ratified with a sacrifice of Chilese camels. The president then dines in company with the toqui, and chief ulmens, to whom he makes the usual presents in the name of his sovereign; which are always repeated on the arrival of a new president, and are accompanied with a kind of fair advantageous to both nations.

The Araucans acknowledge a supreme being, the author of all things, who is called *PILLAN*, or *THE SPIRIT*; and they have also epithets, expressive of his residence in heaven, his being the soul of all creation, dreadful from his thunder, the architect of the universe, the omnipotent, the eternal, the infinite. There are inferior spirits of various rank and power, who administer the affairs of worlds. This doctrine may be said to be that of the Chinese, and of many enlightened nations in Asia. The christian system admits of spiritual principalities and powers; but regarding them as little superior to men, seems to refuse the Asiatic idea of infinite gradations of spiritual power, before they arrive at the ineffable name of the Great Creator; which may be called a rational polytheism, as the least of these sublime beings may be a deity to the abject race of mankind. The Mars of the Araucans is *Epunamun*; while *Meulen* is a beneficent god and lover of the human race. By a kind of manicheism common among savages, whose life is very unhappy, they admit an evil principle, *Guecubu*, the author of

Religion.

RELIGION. calamity and death. Many genii under Meulen attempt to balance the preponderance of Guecubu. They are and female, but generation does not take place in the spiritual world. It is singular that the Araucans call the male spirits *Gen*, equivalent to the *Gin* of the Arabs, and the *Genii* of the Romans. The female spirits are supposed to serve the men; and on meeting with any success an Araucan will say, "I too have my nymph."* The people conclude that the spiritual lords resemble their ulmens, and would despise any attempts of mortals to praise or honour them. Hence there are neither temples, nor idols, nor priests; nor are sacrifices known, except during endemial maladies, or on a treaty of peace. Yet they often address prayers to Pillan and Meulen. Christianity is tolerated throughout their domains, and the missionaries well received, but conversions are very rare. They are attentive to omens and dreams; and the bravest Araucan warrior will tremble at the sight of an owl, one of the perpetual incongruities of the human character. Their magicians are consulted in all affairs of consequence; and they are firm believers in apparitions. They all admit the immortality of the soul, and that man is composed of a body called *anca*, and of a soul called *am* or *pilli*. They think that after death the soul passes to the west, to a place or country called Galceman, where some believe that delights abound for the good, while the bad are punished by privation. Others say that all souls will enjoy pleasures; punishments, like crimes, being short and transitory. They watch the dead all night; and on the third day carry the body to the *eltun* or cemetery of the family, commonly situated in a wood or upon a hill. The bier is surrounded with women, who affect to weep; while another spreads ashes behind, that the soul may not return to the house. The body being set down, the warlike weapons are placed around; or, if a female, her ornaments; with plenty of food and vases of liquor, often cyder or wine, that there may be no want on the journey to the other world. Sometimes a horse is slain. Taking leave of the dead with many lamentations, and wishing a happy journey, the body is covered with earth, or with stones in the form of a pyramid, over which they pour cyder in abundance.

Funerals.

* *Storia Civile*, 81.

ance.* These practices present a striking resemblance of the ancient FUNERALS. forms in Asia and Europe. They believe that an old woman soon arrives, in the form of a whale, to carry the soul across the ocean, where another old woman guards the Elysian Fields, and sometimes exacts an eye, when the passenger cannot satisfy her demands. The business and pleasures of another life remain the same; and the husband, if he choose, may have his wife again; but there are no children because it is the abode of the dead. There are also wars and battles; and armies, meeting in the air, cause thunder and lightning. During every tempest, on the Andes or the ocean, they see a battle between the souls of their compatriots and those of the Spaniards; the low sound in the clouds being the trampling of horses, the thunder the sound of double drums, and the lightning the discharge of artillery. If the storm bear towards the Spanish territory, they suppose that their souls are victorious, and exclaim in triumph, "follow, follow, friends, kill, kill." If the contrary they are very sad, and exclaim in consternation "halt, take courage." They have an idea of a great deluge, during which many were saved on the mountain *Thegtheg*, which can float on water. This idea, according to our author, has arisen from the earthquakes and volcanoes so common in their country; for during a severe earthquake they still run to the mountains, with provisions, in hopes they may escape, if the sea should overwhelm their country.

The year is solar and begins on the 22d December, immediately after their summer solstice; while the winter solstice in June divides it into two parts. There are twelve months of thirty days, and five days are intercalary. They have four seasons as the Europeans, each of three months; and the day is only divided into twelve parts, six of light, and six of darkness, as among the Chinese, and the people of Japan and Otaheite. The hours of the day are distinguished by the height of the sun; and those of the night by the position of the stars. Constellations are also marked, the Pleiades being styled that of *six* from the most apparent stars, and the Antarctic cross that of *four*. The milky-way is called the Street of the Fable, because the astronomers of the country reject certain popular tales concerning it. They

* It must be remembered that Chili abounds in vines, and European fruits.

ASTRONOMY. distinguish the planets, and believe them to be inhabited. They have also regular measures ; but little or no idea of the speculative sciences. They cultivate rhetoric, poetry, and medicine. To an eldest son of an ulmen, if deficient in eloquence, the second would be preferred, or even a near relation, if a celebrated orator. Boys are brought to the public assemblies to hear the speeches delivered, and learn to speak in public. Jealous of the purity of their native tongue, if a stranger settle among them he is obliged to adopt a Chilese name ; and even the missionaries submit to this ordinance. They must also speak with great purity, before they can be heard, otherwise their discourses will be treated with rudeness by the critics of Araucana. The style of the orators is highly figurative and allegorical, and abounds in idioms not used on other occasions, whence it is called *coyagtucau*, which Molina translates the parliamentary style.* Apologues and parables are frequent. The poets are called *genpin*, or masters of speech, because they use or create words as their enthusiasm dictates. Strong and lively images, bold figures, frequent allusions and similes, novelty and force of expression, pathetic sentiments, concur to form their poetry, which mostly repeats the actions of their heroes. The lines are of eight or eleven syllables, metres which seem universally to please the ear. They are all in blank verse, though the poet will at very distant intervals admit a rime.

Poetry.

Medicine.

There are three classes of physicians, of which the empirical are the best, only using herbs, and having some knowledge of the pulse : a second class believes that all diseases proceed from insects ; while a third supposes them the effect of witchcraft, and thus occasion the death of innocent persons. There are also surgeons, who can set broken bones and cure wounds. But when our very intelligent and ingenious author supposes that the Araucans were conversant, before the arrival of the Spaniards, in all the subjects for which they have now appellatives, the consequence seems fallible ; for in the jealous purity of their speech they may have invented new words, or selected old women as critics and etymologists, as practised by the Abipons. They have other trades and professions ; but are without the use of money, exchange only being known. The chief foreign trade is in *ponches* or cloaks, and cattle,

* Storia Civile, 95.

which

which are exchanged with the Spaniards for wine and European articles. TRADE.
In their pride they despise all nations, and have degrading appellations for the Europeans. They are fond of compliments, and the right hand is the place of honour as in Europe, while the left is in Asia. If a Spaniard should dare to speak to an Araucan without lifting his hat, he would be sharply reprimanded. Eager for vengeance, they are long and profoundly sensible of benefits. They have names and surnames to mark families. Polygamy, as already mentioned, is universal, and they may buy as many wives as they can maintain, while an old bachelor is regarded with great contempt as an enemy of the state. The marriage rite is simple, being a kind of amicable rape, the husband seizing the bride unexpectedly, while she affects to exclaim for assistance. Her friends then pass to his house, and, after a festival, receive the nuptial present, which is considerable: the first wife however has particular honour, while the others are only regarded as concubines. The husband indicates his preference by ordering one, during supper, to prepare the bed. The others sleep in the same chamber, which no man is permitted to enter; strangers being lodged in huts at a distance. All the wives highly respect their husband, who is by them styled *buta*, or great. Each presents him daily with a dish made over her own fire; whence instead of "how many wives," the question is "how many fires?" The women are cleanly to an extraordinary degree; and the houses and furniture are swept and wiped repeatedly during the day. Conscious at the same time that personal cleanliness is the chief charm of the sex, they comb their hair twice a day, and every week wash their heads with a kind of soap so as to preserve the beauty of the hair; nor is any spot or soil visible on their garments. The bath is universal, and in summer is used by the men often in the day, and always once during winter; they are excellent swimmers in various postures, and will swim under the water across a wide river. The females are equally fond of the bath, but seek separate places protected by shade and solitude. On the day of parturition they bear the babe to the river, wash it and themselves, and return to their business, without any bad consequence; their frequent use of the bath being supposed the prime

MARRIAGES. cause of this facility and vigour. No bandages are used ; the babe is placed in a hanging cradle upon thin skins, and covered with a cloth ; it is rocked with a cord which hangs from the cradle, so that the mothers are free to follow their occupations. The infant soon walks about, wanders every where, and eats what it pleases. Hence a health seldom interrupted except by fevers, arising from drunkenness or excessive exercise. Their education is confined to horsemanship, the use of arms, and the practice of speaking their language with elegance. Faults are little noticed, and never chastised, as in their opinion punishments can only produce falsehood or cowardice.

Food.

The Araucans are generally frugal in their food, which mostly consists of grain or pot herbs, dressed in various manners. Maiz and potatoes are the most esteemed ; and of the last they have had more than thirty varieties from time immemorial, the experience of ages having taught them to regard it as a most salutary food. Although they have abundance of tame quadrupeds and birds, yet they eat little meat, even pork, though they know how to make sausages and puddings. The ocean and the rivers teem with delicate fish, but they make little use of it : bread is reserved for great festivals, and instead they use a kind of light cake or potatoes. Their drink consists of various kinds of beer and cyder, derived from maiz, apples, and other fruits of the country ; but they are very fond of wine which they procure from the Spaniards, and from policy or negligence do not plant vines, though they would thrive admirably in their country. The master eats with all the family at the same table, which is only covered with earthen ware and goblets of horn or wood. The ulmens have often services of plate, but they are only produced to treat some stranger of distinction. Sauces are made of several plants of their country ; and in summer they love to dine under the trees planted for that purpose around their houses. Fire is lighted by turning a stick rapidly on another, as in making chocolate. Besides dinner and supper, there is every day a breakfast and a collation, consisting of parched or roasted maiz, steeped in warm water in the morning and cold in the evening. But this frugality is neglected on solemn occasions, when no expence is spared ; and the company will sometimes consist of three hundred, who will consume

more animal and vegetable food, and drink more liquors, than might Food.
 suffice a family for two years. These feasts which last two or three
 days are called *cabuin* or circles, because they sit round a tall and
 flourishing reed planted in the ground.* These are public festivals
 which all may partake: but when many hands are required to cultivate
 the earth, sow the seed, build a house, or the like, those who partake
 of the banquet are understood to offer their assistance, and as most
 are without other occupation, the task is often finished in a few hours.
 This custom has even passed to the Spanish farmers. Fermented-liquors
 form the chief part of a festival; and as the rich pride themselves on
 such occasions, the Araucans may be said to pass their lives in drinking
 and diversions, or as they call it "changing their minds." Music,
 dancing, and gaming form their usual amusements. The music is bad
 and the songs harsh and disagreeable, as if originally contrived to frighten
 wild beasts; but the dances are more cheerful, harmonious, and varie-
 gated. The women dance apart, and seldom join the men. Leibnitz
 has observed that men have shewn more talents in the invention of Games.
 games, than in any other department whatever. The Araucans have
 also shewn their usual skill. Their games are divided into sedentary
 and gymnastic; the former being very numerous and ingenious; and it
 is truly singular that, from time immemorial, they have known the
 profound game of chess, by them called *comican*.† They are also very
 fond of the *quechu*, which has an intimate analogy with tables or back-
 gammon; but instead of dice they make use of a triangular bone marked
 with dots, which they throw from a circular box standing on two feet,
 perhaps the *fritillum* of the ancient Romans. The youth love wrest-
 ling, and the race, and a kind of tennis. But the favourite gymnastic
 games are the *peuco*, and the *palican*; the first representing the siege of
 a fortress, and a dozen or more persons form a circle, placing a boy in
 the middle, whom the assailants endeavour to seize, but seldom succeed.
 The palican resembles a battle, thirty or more players attempting to
 drive the ball within their bounds, and this game will sometimes oc-
 cupy half a day. Sometimes one district will play against another, and

* Storia Civile, 213. † Ib. 215.

there

GAMES. there are two factions known throughout the country, as the colours in the Byzantine empire. The Spaniards have also adopted this game, in spite of repeated prohibitions of the Captains-General or Presidents of Chili.

Puelches. The Puelches of the mountains, now united with the state of Araucana, are more rude and savage than the other inhabitants. Their name signifies eastern men. They are of a tall stature, and fond of the chase, so that they often change their habitations, and even detach colonies to the eastern sides of the Andes, as far as the lake Naguelgapi, and the shores of the Atlantic, in the wide Patagonian plains. The Araucans highly esteem these mountaineers for their bold services in war, and their lasting fidelity to the confederacy.

For this extended account of the Araucans no apology shall be made, as they are still little known in Europe, and have almost totally escaped writers on geography. After a description of the globe, and, I flatter myself, not a negligent examination of the various races and nations of mankind, there has not occurred any tribe in such a singular stage of society. With all the virtues and faults of the ancient Germans, the ancestors of many European nations, the Araucans unite features peculiar to themselves; and they completely evince that the ideas of some theorists concerning the inferiority of the human race, manifested by the indigenes of this quarter of the world, are as fallacious, as the ideas of an inferiority in the quadrupeds. In fact these theorests, when they at the same argue that America is a new and virgin continent, just arisen like Venus from the ocean, ought to have reflected that vigour is the attribute of youth. The fables concerning the Patagons or Tehuels have passed away, but still they are superior in size to any Asiatic or European race of men; and after the destruction of the Peruvian empire providence seems to have preserved the Araucans, to evince that in the noblest attributes of man, in soul, in mind, in courage, in probity, the indigenes of America may rival those of any quarter of the globe. The inferiority of the other tribes must therefore arise from the breed, probably African; and not from the soil or climate, as ridiculously inferred. The suppression of talents among the Spanish or Portuguese settlers must be imputed to the inquisition, the priesthood, and

and the jealousy of a despotic government; and the same effects have prevailed at home as well as abroad. When the causes were suspended for a short interval, publications of great merit appeared at Lima, Guatemala, and Mexico: and the Araucans, at the other extremity of this vast continent, have had their Franklins and their Washingtons. PUELCHES.

The history and wars of the Araucans, which are amply detailed by our excellent author, are foreign to the nature of this work. Unconquered by the Incas, they boldly resisted the Spaniards, who approached their territories in 1550. Proceeding beyond their northern frontier, the great river Biobio, to assist the Pencons against the new invaders, the Spanish fire-arms were seen and felt without astonishment; and the victors of Peru were at last astonished to find an unconquerable people. In the first engagement the Spaniards were disordered, and the horse of their leader slain; while the general of the Araucans fell on the field; and a sharp conflict remained undecided. Valdivia, instead of making any progress, began to build a fortress to defend his territory; but in another battle, 1553, he was totally defeated and slain. Since that period wars have been carried on with various success. The Spaniards have established colonial towns, which have been repeatedly taken and ruined by the Araucans. The frontier banks of Biobio are lined with fortresses. At the peace of 1773, after a war which had cost the Spanish treasury 1,700,000 dollars, the Toqui of the Araucans insisted on having a resident minister at the city of Santiago, a proposition which the Spaniards reluctantly accepted; and the Araucan envoy with his train was lodged in the college of St. Paul, formerly belonging to the Jesuits. The Araucan state retained all its territory and glory, when Molina wrote in 1787; and it is to be hoped, that it will continue to exist as a perpetual proof of the courage and talents of the indigenes.

The Spaniards are contented with that excellent tract of territory which lies between the desert of Atacama and the river Biobio.* This settlement is divided into thirteen provinces, *Copiapo, Coquimbo, Quillota,*

* Storia Civile, 265.

PROVINCES. *Aconcagua, Melipilla, Santiago, Rancagua, Colchagua, Mauli, Itata, Chilian, Puciacay, and Huilquilema.** They also possess Port Valdivia, in the country of the Cunchi; the archipelago of *Chiloé*; and the island of

Government. *Juan Fernandez.* Spanish Chili, a military province, is governed by an officer of merit, commonly of the rank of lieutenant-general, who assumes the titles of President, Governor, and Captain-General of the kingdom of Chili. He resides in the city of Santiago, and is wholly independent, except in cases of war, when he consults the viceroy of Peru. As captain-general he directs all military affairs; not only the three great officers of the kingdom, the camp-marshal, *serjeant-major*, and the commissary, but the four governors of Chiloé, Valdivia, Valparaíso, and Juan Fernandez, being subject to his orders. As president and governor-general, he administers justice, or rather presides in the Court of Audience in Santiago, divided into two halls, the civil and the criminal; with a regent, judges, fiscal or royal procurator, and a protector of the Indians. Where the property exceeds ten thousand dollars, an appeal lies to the supreme council of the Indies; but justice, as in all the Royal Audiences, is administered with singular integrity. There are also tribunals of finance, of the papal bull, of vacant lands; and the consulate, or tribunal of commerce, a new institution in the Spanish colonies, is independent of all the others. The provinces are governed by prefects or corregidores, commonly named by the captain-general. The inhabitants are formed into regiments of militia; and there is besides a body of

Alcedo gives the following list of the divisions of Chili.

Gobiernos.

Concepcion.	Chiloé.
Valdivia.	Islas Malvinas.
Valparaíso.	Islas de Juan Fernandez.

Corregimientos.

Aconcagua.	Puchacay.
Capiapo.	Quillota.
Coquimbo.	Rede.
Colchagua.	Santiago.
Chillan.	Rancagua.
Maulé.	Itata.
Melipilla.	

regular

regular troops. In the town of Concepcion, at the mouth of the Bio-
bio, there is a regiment of cavalry, and another of infantry, to watch
the Araucans; and the city of Santiago maintains some troops of dra-
goons for its police and defence.

GOVERN-
MENT.

Spanish Chili is divided into two vast bishoprics, Santiago and Con-
cepcion, both suffragans of the archbishop of Lima. The cathedrals are
served by canons; and the holy, or rather accursed, office of the inquisi-
tion, has at Santiago a commissary, with various subalterns. There are
no convents except at Santiago and Concepcion.

Church.

These cities are well built, with streets at right angles, commonly
thirty-six feet wide. The repeated earthquakes have enforced the mode
of only a ground story; but the houses are whitened without, and com-
monly painted within: and many of the new buildings are of stone, and
of two stories, as such have often withstood earthquakes as well as those
of one. The cathedral of Santiago is 384 feet in length, the work of
two English architects, but finished by Indians, their disciples. The mint
of Santiago is the work of a Roman architect.*

Cities.

Spanish Chili has benefited greatly by the liberty of commerce 1778,
and the population begins to correspond with its delicious climate and fer-
tile lands. The Spaniards are mostly from the northern provinces, and
mingled with a few English, French, and Italians. Molina ob-
serves, that the creols, of whatever European nation descended, re-
semble each other. Well made, intrepid, incapable of treason or mean-
ness, vain, liberal, ardent, fond of pleasure, sagacious, observant, inge-
nious, docile, they only want instructive books, and scientific instru-

Population.

* With his usual want of arrangement, Estalla, xx. 200, interrupts his description of Peru, by
a letter or chapter on the discovery and restoration of the city of Olorno. This town was taken by
the Araucans about the end of the sixteenth century; and in the vague enumeration of these times
(which has been extended to Spain itself, said, without any evidence whatever, to have contained
fifteen millions under the Moors), is asserted, with the surrounding district, to have contained 150,000
subject Indians. In a council of war, 2d October 1793, Don Lucas Molina governor of Valdivia,
promised to punish the Araucans for their inroads, as they had burnt some of the missionary stations;
and at that of Rio-Bueno had slain one of the missionaries, two soldiers, some friendly cazics, a
courier who was passing to Chiloe, and an officer of the treasury. A part of the garrison of Val-
divia was accordingly dispatched; and it was adjudged that Olorno and its domains should be re-
stored to the Spaniards. Such is the imperfect narrative of Estalla, which seems to proceed on a
vague report.

POPULATION.

Manners.

ments, which are very rare, and sold at enormous prices. The noble arts are however neglected, and even mechanics are far from perfection. The men generally dress in the French fashion, and the women in that of Peru; but the Chilese ladies wear longer gowns, and have a more modest air. Lima however is the Paris of Chili. Wealth is wasted in the purchase of rich dresses, liveries, coaches, and titles of Castile, a fixed sum purchasing that of count, another that of marquis; and an opulent merchant may become a duke when he pleases. Two natives of Chili have even become grandees of Spain. The common people finding the Araucan dress convenient, have adopted their fashion. Dispersed through a wide country, and not watched, as in Spain, by the vulgar insolence of a village magistrate, they enjoy their liberty, and lead a happy and tranquil life amidst the pleasures of the delicious climate. Fond of gaiety, music, and poetry, many are *improvisatori*, or in the language of the country *palladores*, as in the province of Cordova, on the other side of the Andes. The Spanish language is singularly fertile in rimes, and the courtiers in the sixteenth century would converse for hours in metre; hence the facility of their celebrated poet Lope de Vega, who, besides twenty large volumes of poetry, composed five hundred plays, in three acts, and short lines, each written in the space of a day, being in fact a mere *improvisatore*, but with wonderful invention in his plots. Spanish is generally spoken in Chili; but the country people near the Araucan frontier use the Araucan or Chilese language. Constantly on horseback, in an exquisite air, they are healthy and robust. The small-pox was not known till 1766, when it appeared in the province of Mauli. The mortality was terrible, till a peasant, who had been cured, treated the patients with cows' milk, either in drink or clysters. Not one died; while the physicians, with numerous receipts, could save very few.* Laffon had tried the same practice with great success, as appears in the Medical Transactions of Paris, 1779; but the Chilese peasant administered the milk pure, while Laffon mingled it with a decoction of parsley. Milk certainly, by sweetening the blood, has singular powers against this infection. The leather strap and balls, de-

* Storia Civile, 277.

scribed by the author of Anson's voyage, have been already mentioned; MANNERS.
and Herodotus informs us of a similar weapon among the Sagartii. Of
the Chilese commerce some idea has been given in the account of Peru. Commerce.
It occupies twenty-three or twenty-four ships, each from five to six
hundred tons; bringing silver, sugar, rice, cotton, in exchange for the
Chilese grain, wine, pot-herbs, conserves, dried flesh, wood, copper, &c.
Ships from Spain, in return for European goods, receive gold, silver,
copper, vicuna wool, and dressed leather. It would be highly advan-
tageous to Chili to open a direct trade with the East Indies.*

Our author's account of the Chilese or Araucan language, and the vo-
cabularies, are extremely curious and interesting. It is said radically to
differ from the *quechua*, or language of Peru.

The natural history of Chili is as ably treated by our excellent author Natural History.
as the civil; nor shall his arrangement be changed in this short abstract.
The length, as already mentioned, he computes at 1260 g. miles. The
breadth depends on the distance of the Andes from the great ocean, be-
ing from 24° till 32°, about 210 miles; thence to 37° only 120, but from
that parallel to the archipelago of Chiloe the distance may be 300
miles. Square contents, comprising the Andes, about 378,000 square
miles.† The N. boundary is the desert of Atacama; on the E. the
eastern branch of the Andes, which divides Chili from Cuyo, in the
viceroyalty of La Plata, and from the savage tribes. On the S. our au-
thor mentions the Magellanic Lands, a name totally dismissed from geo-
graphy, since the voyages of Cook have evinced that there is no con-
tinent to the S. of America; and it would be idle to give the name, as
restricted, to a few sandy deserts at the southern extremity of this con-
tinent. On the S. there are barren mountains, and no tribes to be
feared, amidst the cold regions covered with sand and snow. Eight or
nine paths open to the Andes on the E. the most frequented being that
which leads from the Chilese province of Aconcagua to Cuyo; a journey
of eight days, like those over the Alps in Switzerland, on shelves in the
perpendicular rocks, hanging over the profound apertures, through

* In his able treatise of the commerce of Peru, Lequanda has also illustrated that of Chili. The
reader is referred to the account here given of the viceroyalty of Peru; or to Estalla, xx. 275.

† Storia Naturale, 18.

which

scribed

NATURAL
HISTORY.

which wind the rivers Chilli and Mendoza. Mules are used; but the travellers are often obliged to proceed on foot. Some little plains are found, where the Incas, when they subdued Cuyo, and the northern provinces of Chili, constructed little houses of stone, some of which remain. The name Chili is indigenal, but is pronounced *Cili* by the natives, while the Spaniards use *Tchili*. All the etymologies given by geographers are false, snow being in the Chilese tongue *pire*; and the Chilese themselves pretend that the name is derived from flocks of a bird resembling the thrush, regarded as a happy omen by the first settlers. What is called the maritime part, presents three chains of hills parallel to the Andes; the mediterranean is mostly plain. The grand belt of the Andes is here about 120 miles in breadth, with transverse ridges full of stupendous ruptures and precipices; but studded with little vales, and excellent pastures, watered with many streams and cascades from the rocks.

Mountains.

The highest mountains of the Chilese Andes are Manña, at $28^{\circ} 45'$; Tupungato, $33^{\circ} 24'$; Descabado 35° ; Blanquillo, $35^{\circ} 4'$; Longavi, $35^{\circ} 30'$; Chillan, 36° ; Corcobado, 43° .* Molina had not an opportunity of measuring the prodigious height of these mountains; but the Spaniards and Chilese suppose them to be more than 20,000 feet above the sea: the lowest part is in Copiapo. When our author argues against Buffon, that mountains increase in height as they recede from the equator, he shews no great acquaintance with geography. It seems to be certain that the Andes of La Paz, that is in the centre of the chain, are higher than those of Quito or Chili, nearly equidistant; another proof that the Andes cannot be strictly regarded as passing into North America, while in fact the chief chain extends to the prodigious heights of Santa Marta, covered with perpetual snow, while another grand branch proceeds by Bogota to the N. E. being also in many parts covered with perpetual snow. The western branch, as appears from the map of La Cruz, totally perishes at the gulph of Darien; and no snowy mountains are known in that quarter, nor in New Spain, till two other chains commence, one on the S. E. another on the N. W. of Mexico; which are

* Storia Naturale, 23.

totally unconnected with the Andes, as known to every student of exact geography. The high mountains of Tibet, now known to be about 25,000 feet above the sea, on the same gigantic scale, as was to have been expected, with the rivers and other features of Asia, are much at the same distance from the equator on the N. as those of La Paz on the S. so that the highest mountains may be said to be near the tropics; and it is probable that when New Holland is fully explored, a great chain may be found to run E. and W. through the centre of the country. But from the latitude of 40° towards either pole the mountains certainly decrease in height, as known to every geologist.

The singularities of Peru here cease, and the four seasons are as regular as in Europe, though in an inverted order, being in the southern hemisphere. As usual beyond the tropic of Capricorn, spring begins on the 21st September, summer in December, autumn in March, and winter in June.* From the beginning of spring to the middle of autumn, the sky is always serene, chiefly between 24° and 36° lat. the years being rare in which a slight shower falls during that period. The rains begin in the middle of April, and last till the end of August. In the northern provinces of Coquimbo and Copiapo little rain falls; but in the middle there are three or four days of rain, alternating with fifteen or twenty dry days; and in the southern, the rains sometimes continue without interruption for nine or ten days. Thunder is scarcely known, except on the Andes. Snow is unknown in the maritime provinces; in those near the Andes a little will fall once in five years. But on the mountains, from April to November, there are such constant falls of snow that it remains perpetual, and the passage cannot be effected except in midsummer. Yet in Chili, in general no river is ever frozen, and the cold rarely passes the freezing mark on Reaumur's thermometer. The perpetual snow of the Andes renders them a sublime spectacle. The interior provinces use it to refresh their liquors, but those towards the ocean are too distant. In August a little hoar frost may be seen in the morning, but the rest of the day resembles spring. Through the whole kingdom the dews are copious in spring, summer, and autumn; the N. and N. W. winds bring rain,

* Storia Naturale, 30.

while

totally

CLIMATE. while the S. and S. W. dissipate the clouds. On the other side of the Andes, the N. W. wind, called *sonda*, is more suffocating than the scirocco of Italy : but in the Cisandine countries of Peru and Chili no such effect is perceived. At mid-day a breeze often rises from the sea, and lasts two hours, so regularly that it is called the clock of the peasants. Fiery meteors are very frequent, as in the Transandine countries. The aurora australis seldom appears ; but in 1640 one of great extent is said to have been observed every night, from the beginning of February to the end of April ; and the people of Chiloe say it is frequent in their country.

Volcanoes. Volcanoes abound in Chili, the most terrible being that of Peteroa, which on the 3d December 1762, opened a new crater, splitting into two parts, a contiguous mountain for the space of many miles. The tremendous noise was heard throughout the kingdom, but was not accompanied with any earthquake. The ashes and lava filled the adjacent vallies, and caused an inundation of two days in the river Tiugericca. A fragment of a mountain falling on the great river Lontua, totally stopped its course for ten days ; and the stagnated waters having formed a vast lake, which still exists, at last opened a passage and inundated the neighbouring country. There are only two other volcanoes in Chili, which do not belong to the Andine chain, a small one near the river Rapel, which only ejects smoke ; and the great volcano of Villarica, so called, because it is near a lake of that name in Araucana. This flaming mountain, which is seen at the distance of more than 150 miles, appears isolated, but is thought to be joined with the Andes, being at a small distance. The summit, which burns day and night, is covered with eternal snow ; but the sides to the extent of fourteen miles, are shaded with the most enchanting forests which can be imagined, watered by innumerable crystalline streams. This verdure seems to denote that the eruptions are now rare, and few signs remain of its ancient fury. In our author's opinion, the earthquakes arise from the elasticity of the internal air, and the prodigious force of water reduced to steam ; they being little known in the Transandine countries, distant from the sea. They seem to be unfelt in the central parts of any continent, whence it may be argued that the cause cannot be very deep. Earthquakes are

even

even little known in Copiapo and Coquimbo, where subterranean noises VOLCANOES. are often heard as in Tucuman. Slight earthquakes are felt three or four times in the year; but, since the entrance of the Spaniards, there have been only five of any consequence, those of 1570, 1647, 1657, 1730, which, on the 8th July, buried the city of Concepcion; and that of 1751, from S. to N. which utterly destroyed the same city, and was accompanied with a globe of fire, which darted from the Andes to the ocean; but only seven persons perished, there being in Chili always a warning noise, or vibration of the air, and the shocks are horizontal, not explosive.

The rivers, though sometimes considerable, have but a short course Lakes. from the Andes to the ocean. There are several lakes, both fresh and salt, the two largest being in Araucana. The Lauquen, called Villarica by the Spaniards, is about seventy-two miles in circuit, with a beautiful conic hill in the centre. The Nahuelgapi is about eighty miles in circumference; and in the centre is an island crowned with beautiful trees.* This gives rise to a river of the same name, running towards the Atlantic; while from the first springs the river Tolten which joins the Pacific. There are many mineral waters, and salt rivers. The Araucans suppose the former to be special gifts of their beneficent god Meulen.

The fertility of the soil excites admiration. Many parts that were in Soil. constant labour long before the arrival of the Spaniards, and have since been always cropped by them, are so little degenerated, that no manure is necessary. The grain is said to yield from a hundred to a hundred and fifty; but our exact author adds that, in general, the crop in the mediterranean lands is of sixty or seventy; and in the maritime forty or fifty; though the harvest be left too long on the ground. The soil towards the shores often resembles the fat land of Bologna, of a reddish brown, friable, tender, mixed with a little clay or marl, and sometimes presenting white or brown pebbles, arsenical and martial pyrites, with shells, madrepora, and other marine productions. That of the mediterranean parts and Andine vales is of a yellowish black, porous, friable,

* Storia Naturale, 56.

Soil.

soft, often gravelly, and sprinkled with pyrites, flints, and decomposed marine bodies. Both these soils are of great depth, as may be observed in the water courses. There seems little doubt that the ocean has retired, and our author gives proofs that it still continues to diminish. His account of the Andes of Chili has already been given in the general view of these mountains.

Mineralogy.

In describing the mineralogy of Chili, our excellent author observes, that all the argillaceous earths mentioned by Wallerius are here found, exclusive of the bole of Lemnos; and he adds five new sorts to the former descriptions; but as his book is printed in the same year that Bergman may be said to have founded modern mineralogy, they would probably, if examined, fall under known descriptions. Of metallic earths, by his arrangement, there are mountain-blue and green, native ceruse, ore of zinc, with brown, yellow, and red okers. Among the rocks are slate, hone, green talc, steatite, asbestos, amianthus, gold and silver mica. The talc commonly called Muscovy glass is found in plates of a great size and purity, and is used for windows. Squares of two feet might be taken with precaution. One sort is irregularly spotted with yellow, red, green, and blue, but is rather curious than useful. Limestone, marble, and gypsum abound. Besides statuary marble, the black, greenish, and yellow appear; and two mountains of Copiapo and Mauli are entirely composed of marble of different colours, disposed in regular strata from the bottom to the top, so as to have the most striking appearance of art. Our author's account of the spars and fluors is not very clear, as mineralogy was imperfect when he wrote; but he mentions fluors, yellow, green, and blue, called false topazes, emeralds, and sapphires, the second being probably the stones worn by the Araucan women: and adds, that the most singular spars are the hexagonal of different sizes, found in the gold mines of Quillota, pierced in a thousand directions with little threads of gold, presenting the most beautiful spectacle which can be seen. A kind of bluish gypsum, if our author be exact, is always found near the volcanoes of the Andes, in beds of considerable extent, and approaching to calcination. This is chiefly used to whiten the walls, and adds a delicate light blue. The Andes also present fine alabastr, and large plates of selenite, used by the inhabitants

tants of San Juan in the windows of their churches. Of siliceous stones, there are quartz, flint, and rock crystal. There are also free stone and grind stone, with some common agates, and jaspar red, green, grey, white, and variegated. Our author also adds lazulite or lapis lazuli, but seems here to borrow his account from Frezier; and the real discovery of this precious and beautiful substance, which yields the ultramarine, would be of infinite consequence to the arts. By his account there appear to be beds of rock crystal, as in Madagascar; for he says that columns might be formed of the height of six or seven feet. It also occurs of different colours, called false ruby, topaz, jacinth, emerald, &c. Our author adds, that one real emerald was found in Coquimbo, and a topaz in the province of Santiago. A little hill, to the N. E. of Talca is almost wholly composed of beautiful amethysts, in a kind of grey quartz. Turquoises, that is teeth or bone coloured green by metallic vapours, are found in the Copiapo. Beautiful breccias, porphyries, and granites occur in the Andes. The road through the chain to Cuyo, passes according to our author, through rocks of porphyry, red, black, and green, spotted with various colours; among which one is of remarkable beauty, being spotted with red and blue, upon a yellow ground. This he calls *Saxum Chillenfe* because it is found near the river Chilli. He also mentions strata of black porphyry, with brown spots, naturally polished, the stones being generally two feet broad, and three or four inches thick; but pieces may be had of eight feet in length. The regularity and polish of these stones he cannot explain.

Rock salt abounds, and is often crystallized in beautiful cubes, red, yellow, blue, or white. Sal almoniac is common near the volcanoes, and nitre abounds in Coquimbo. Alums are found of different kinds, and all the vitriols. A volcanic country naturally presents bitumens of all kinds, even that called the mummy of Persia. Jet abounds in Araucana; and coal in the neighbourhood of the city of Concepcion, and many other parts of the kingdom. When our author speaks of amber, he indicates ambergrease, now known to be the sperm of the whale. The province of Copiapo, one of the richest metallic countries in the world, presents two mountains entirely composed of crystallized sulphur, so pure that there is no occasion to refine it. It needs not be added,

MINES.
ALUGU.

that the same substance abounds in all the Andes. Pyrites are found of all the kinds indicated in the great work of Henckel, the most remarkable being that of a cubic form, in which gold and copper are mineralized with sulphur. The compact pyrites, called the stone of the Incas even among the Chilese, is found in abundance in a high mountain of the province of Quillota.

Among the semi-metals are observable arsenic, cobalt, bismuth, zinc, antimony, and quick silver; but the antimony alone is sought for the fusion of some ores of silver, and by the goldsmiths to purify gold. Mercury, both virgin and cinnabar, is found in various parts of the kingdom; but is rigorously forbidden to be wrought, as interfering with the royal monopoly. The richest appearances are in Coquimbo and Quillota, the former being in a mediterranean mountain, composed of brown clay and a black argillaceous stone. That of Quillota, near a place called Limache, is in a calcareous rock.*

Tin.

Chili is celebrated as one of the richest metallic regions. The lead is found of excellent quality, but it is only used for the fusion of silver, and a few domestic purposes. It appears in the shapes of galena, green ore, white sparry ore; and is always mingled with a little gold or silver, which is despised by the miners of this rich country. The mines of tin are yet more neglected than those of lead, in spite of their abundance, and the excellence of the mineral: they are mostly in sandy mountains, where they do not form veins like other minerals, but appear like black, little, irregular stones, which contain the metal nearly pure, with some arsenic and iron. Tin crystals of various colours are also common.

Iron.

Iron is so abundant, that there are few rivers which do not deposit a sandy ore of that metal. By special regulations iron cannot be wrought in the Spanish colonies, but is a monopoly of the parent country. Hence theorists have conceived that no iron exists, while many provinces of Chili present rich sources of this mineral, the compact black ore, the granular grey, and the solid cubical blue. Araucana also contains excellent mines of iron, supposed to be not inferior to that of Spain. Copper mines chiefly abound between 24° and 36° of S. lat. and the metal

Copper.

* Storia Naturale, &c.

is equal if not superior to any discovered, being often mingled with gold, MINE-ABOUT. like that of Siberia. Most of the copper ores found in Europe also appear in Chili; and the most celebrated mine is that of Payen in the country of the Puelches. That of Curico presents copper mingled with one half gold: being beautifully spotted, it is formed into bracelets, rings, and other ornaments. In other parts are large lumps of pure copper. In one province copper is found united with zinc, forming a natural brass; and our author conceives this singular mixture to be the effect of subterranean fires. It is of a beautiful yellow, as malleable as any artificial brass, and being found near the great river Laxa, is called Laxa copper. Vast quantities of copper are exported from Chili to Spain, perhaps more than 100,000 quintals annually, besides the export to Peru, to the amount of 30,000 quintals; not to mention the home consumption for artillery, and domestic purposes.

While copper is dispersed throughout the country, silver is only found Silver. in the high and cold deserts of the Andes, whence it is little wrought. The chief silver mines are in the provinces of Santiago, Aconcagua, Coquimbo, and Copiapo. The ores are of all descriptions, but the black are the most esteemed. The most celebrated mine of silver is that Copied mine of Copalata. of Uspallata, the largest and richest of any yet wrought in Chili; and situated on the eastern mountains of the Andes, in the province of Aconcagua. This high desert produces no plant, except the *dactylis glomerata* of Linnæus; and a plain about fifty miles in length and six in breadth, called Uspallata, gives name to the mine. It is surmounted with another plain, upon which rise Andine summits of such height, that they are visible from San Luigi, at the distance of three hundred and sixty miles!* These enormous heights, which require an entire summer day to pass them, are composed of black masses of indurated clay, in which are enshafed many round and smooth pebbles, bearing every appearance of having been rolled in water. Morales, in his description of the adjacent province of Cuyo, has observed the same surprising circumstance, which is far from being confined to the surface of the rock. The vein of silver, on the skirts of the eastern chain of the

* Storia Naturale, 103. The direct distance can scarcely exceed 200 g. miles.

plain

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plain of Uspallata, has been traced to the enormous length of ninety miles, nor is the termination yet precisely fixed. Those who have pursued it for ninety miles declare, that it continues of undiminished opulence; and it is by many supposed to extend to Potosi, which is in the same direction, that is a space of 14° or 840 g. miles. If just, what a magnificent instance of the prodigality of nature! The grand vein is always nine feet in thickness; but on both sides numerous veins are thrown off, which, dividing into smaller branches, may be said to penetrate in all directions, a chain of mountains thirty miles in breadth. The gangart, of an earthy substance, and different colours, divides the grand vein into five parallel but unequal parts. That in the centre, only two inches in breadth, is black, though it appear white from the great quantity of metal, and is by the miners called the guide; the two next are brown; while the two external salbands are of a greyish colour. Though this wonderful vein extend horizontally, it sometimes dips so much, that some of the pits dug in 1766 went to the depth of three hundred feet; but the mineral, far from degenerating, became richer and richer. On trial by the assayers of Potosi, it was found, that the *guide* yielded two hundred marks of pure silver in the *caxon*;* the two next veins diminished to fifty; and the exterior only yielded fourteen: but on the whole equal to that of Potosi. The mine of Uspallata, though discovered in 1638, was neglected till 1762, when the people of Mendoza, a town not far from Uspallata, invited two expert miners from Peru; and they continue to work the mine with prodigious advantage.

Gold.

Even after this surprising description, our author asserts, that of all the metals gold is the most abundant in Chili; there not being a mountain, or a hill, which does not produce it in greater or smaller quantities; whence it is found in the soil of the plains, and abounds in the sand of the rivers. The gold of Chili is celebrated as the purest in the world, being generally found of twenty-two carats, and often of twenty-three carats and a half. In the southern provinces, between the river Biobio, and the archipelago of Chiloe, were discovered many mines of excellent gold, from which the Spaniards received immense sums, and

* The American metallurgists apply this term *caxon* to the quantity of mineral which one workman may extract in a day, amounting to about fifty quintals, each of one hundred pounds,

had

had in consequence erected a mint at Valdivia, and another at Osorno. MINES.

But the Araucans, having expelled the Spaniards by force of arms, have closed all the mines, avowing an extreme contempt for that precious metal, as the source of infamous cruelty and unmanly avarice, and the sole cause of the utter degradation of human virtue. The most considerable mines of gold now worked in Spanish Chili, are those of Copiapo, Guasco, Coquimbo, Petorca, Ligua, Tilti, Putaendo, Caren, Alhue, Chibato, and Huillipatagua; all which, except the three last, which have been recently discovered, have, ever since the conquest, yielded a constant and considerable product. The famous mine of Peldehue, near the capital of Chili, has been lost by the intrusion of water; and steam engines, which in the mines of Cornwall, throw out entire rivers, seem to be unknown in Spanish America. This mine yielded daily three thousand crowns of gold.* Our excellent and exact author asserts, that the gangarts of gold are so general, that scarcely can be named an earth, stone or metal, which does not serve as its receptacle: but I have never observed that felspar, either common or compact, serves as a gangart for any metal; which is one distinction between it and petrosilex, of which whole mineral mountains sometimes consist, as at Schlangenberg in Siberia.† This precious metal appears in grains, foli-cules or little leaves, in curious and fantastic shapes, the sports of nature, or in *pepitas*, irregular masses like potatoes, which may be cut with a chissel. The most common gangart, however is, by his observation, a kind of red and brittle argillaceous schistus, the same with that of Potosi; and a specimen of that of Chili may be seen at the collection of the Institute at Bologna. But the *salbands* which accompany the veins, and, which by the Chilese metallurgists are called the *cheft*, as they contain the mineral, are sometimes quartz, at others calcareous spar, hornstone, hornblend, limestone, &c. By far the greater number of veins run N. and S. For the metallurgy our intelligent author may be consulted. He adds, that sometimes little beds of pure gold dust are found in ploughing, or making trenches of irrigation; and such beds are commonly accompanied

* Storia Naturale, 111.

† Consulting Haüy at Paris upon this remark, he could only instance manganese upon felspar; but upon examination it was superficial, and the gangart was not penetrated.

with

MINES.

with a red earth; being the decomposition of the argillaceous schistus. The gold of the Chilese mines, paying the royal fifth, amounts to about four millions of dollars annually; of which a million and a half are coined at the mint of Santiago. The remainder is exported, or melted into ecclesiastic and private vessels, and ornaments, especially for the women; but the quantity which escapes the tribute of the fifth cannot be computed. Any person may apply for a mine; and the President of Chili orders an officer to measure the usual space, two hundred and forty-six feet in length, and a hundred and twenty-three in breadth. One part goes to the king, but is sold to the proprietors of the two others, that is the lord of the estate and the discoverer. Proprietors carefully conceal veins, that their lands may not be injured by the concourse of people. When a rich vein is discovered, there follows as it were a perpetual fair; and a fixed village or town soon arises, when the governor sends a judge or alcaid.

Botany.

Molina has ably discussed the botany of Chili; but as most of the topics have been treated in the description of the viceroyalties, a few remarks may suffice. Many of the plants, and he particularly mentions nettles, are the same with those of Europe; and almost all the pot herbs and fruits of that continent flourish in Chili. The northern provinces even produce the sugar cane, the sweet potatoe, and other tropical plants. Our author has observed about three thousand plants, not to be found in the botanical catalogues of his time, 1782, but it is probable that most of them now occur in the Flora Peruana. Maiz is common and abundant; the *magu* is a kind of rice, and the *tuca* a species of barley, both of them cultivated before the arrival of the Spaniards. Peas and potatoes were also well known to the Chilese. Of the latter they have thirty kinds; and perhaps this valuable root was first brought to Europe from this country, but it must not be confounded with the sweet potatoe, a tropical plant mentioned by Shakspeare, as an aphrodisiac. The large white strawberry, tipped with purple, and about three inches in circumference, not unknown in English gardens, is also derived from Chili. Molina specially describes this strawberry as of the size of a small hen's egg, and says the Chilese call it *quelghen*; and it is cultivated as a crop. Many plants are valuable as dyes, and others as medicinal.

medicinal. The gentian, called *cachanlabuen* is peculiar to Chili, though some botanists have ascribed it to New Granada; it is an excellent sudorific and febrifuge, but particularly useful in diseases of the throat. The *vira-vira* expels the ague; the *payco* is excellent for indigestions. Wild tobacco abounds in Chili. The beautiful flowers and shrubs are infinite. Incense, not inferior to that in Arabia, is produced by a shrub about four feet in height, distilling tears of a whitish yellow, and of a bitter aromatic taste, like the incense of the Levant. The trunk of the *puyi* supplies Chili with excellent corks. The *salsola kali*, a known alkaline plant, abounds on the shores. Chili produces no less than seven kinds of beautiful myrtles; the fruit of one yielding an excellent stomachic wine preferred by strangers to any muscatel. The *culen* supplies an excellent tea, known as a vermifuge. An acacia of the province of Quilota called *jarilla*, yields a balsam of excellent odour, used in the cure of wounds; while the *palqui* is esteemed a superior febrifuge to Peruvian bark. On the banks of the rivers Maypo and Salvia, grows the *cassia fena* equal to that of the Levant. Of ninety-seven kinds of trees, that diversify the beautiful forests of Chili, only thirteen lose their leaves in the winter. In the Andine vallies are cypresses, red and white cedars, and pines; the red cedars being often of enormous size, so that in the isle of Chiloe, from seven hundred to eight hundred planks, twenty feet in length, will be cut from one tree. The willow only differs from the European in its entire thin leaves of a yellowish green; and the infusion of the bark is excellent in fevers. There are large and beautiful *cañti*, the thorns of one, about eight inches in length, being used as wires in knitting. The cinnamon tree, which yields what is called Winter's bark, is regarded as sacred by the Araucans, who present it as a sign of peace. The carob has been already mentioned in the account of La Plata.* Beautiful woods of various colours are also supplied by the Chilese forests. Vines flourish to admiration, but none appear to be native, as in North America; nor does this valuable creeper seem to be any where indigenal in the southern hemisphere. Turkey

* Molina describes it, *Ceratonia fulva carinata, ramis spinosis*. He adds that it differs from the European, by spines four inches in length, and so hard as to be used as nails, while the pods are not different from the *carabols*.

BOTANY.

and Persia, and perhaps Greece are probably the native seats of the cultivated vine ; and wild vines occur in still higher latitudes in North America. The forests of Chili indeed abound with vines, but they arise from seeds deposited by the birds. From the confines to the river Mauli, the vines are three or four feet in height, and supported by stakes ; but further to the south they are left loose on the sides of the hills. The best wine comes from the banks of the river Itata, commonly called wine of Conception, because the vineyards belong to that city. It is red, generous, of an excellent flavour, and equal to the best in Europe. Great quantities are sent to Peru, but the vessels being pitched the fragrance is lost. Muscatel wines are also excellent. The vintage is in April and May. All the other European fruits attain the greatest perfection.

Zoology.

The zoology of Chili differs little, as may be conceived, from that of La Plata and Peru ; and our learned author may be consulted for an ample description. Near Coquimbo excellent oysters are found ; and the beauty of the sea shells is often admirable. The rocks of Chiloe furnish the pholas, called in Italy sea-dates. There are many kinds of lobsters and crabs. Among the insects is the locust of Africa, an unpleasant but seldom destructive guest ; and the parrot butterfly is of supreme beauty. Bees abound in the southern provinces. Reptiles are rare ; but the sea produces seventy-six kinds of fish, all excellent and salutary. The seals called sea cows appear on the shores of Araucana. The species of land and aquatic birds amount to one hundred and thirty five ; while the sea fowl are innumerable, so that, on the shores, the firmament is often darkened by their prodigious flights. The others retire in spring to the forests of the Andes, to propagate ; and on the return of winter they revisit the plains : while those who haunt the snowy mountains become white as in Europe. A species of dove and partridge is frequent ; but it may be doubted whether our common fowl was known to the Chilese before the Spanish arrival, as asserted by Molina, nor is the name in their language conclusive. The beautiful flamingo decorates the banks of the rivers ; and the picaflor or humming bird hovers round the flowers in a rich effulgence of sunny hues. There are not a few singing birds of powerful melody. The American ostrich appears in great numbers, in the Andine vallies ; and especially near the great lake

lake Nahuelgapi. In height he is equal to a man, the neck being two feet and eight inches in length: the head round, small, and clothed with feathers: the legs as long as the neck, feet with three anterior toes, and a short one behind. The wings are eight feet in extent, and black: the back of an ash colour, while the remainder of the body is white. Some are wholly black, others white, but such may be regarded as monsters. In some respects he differs from the African, but is equal in voracity; and the female lays in the sand from forty to sixty eggs, each yielding about two pounds of excellent meat. The feathers are used for plumes, parasols, fans, &c. If there be any inferiority it is on the side of the African. Several eagles and vultures scream among the prodigious precipices and solitudes of the Andes. The condor, a species of vulture, is the most celebrated, and is doubtless the largest bird that pervades the air. The widest extent of the wings, that fell under our author's inspection, was of fourteen feet and some inches. The body greatly exceeds in size that of the royal eagle; and is uniformly black, except the back which is clothed with white feathers. There is also a necklace of raised white feathers, about an inch in breadth: the head is only covered with a thin skin; eyes black with an iris of reddish brown; beak four inches in length, large, aquiline, black at the base, white towards the point: chief feathers of the wing two feet nine inches in length, and four lines in diameter. The female is inferior in size, and of a brown colour; as among all the quadrupeds, birds, and fishes, the female is least favoured by nature; probably in the design of omniscience that their less gaudy colours may not attract the eye and malice of their foes, during the sacred period of gestation and nutrition. Such is the condor, an inhabitant worthy of the majestic Andes.

Some races of dogs were known before the arrival of the Spaniards; but they differ, like all the American animals, from those of the ancient continent. Molina counts thirty-six species of quadrupeds in Chili. The hippopotamus of the rivers and lakes differs from the African; and in size and form resembles a horse, but with palmated feet. This animal was however never seen by the author. There are numerous species of the seal kind: and the *chinga*, known by its pestilential ejection in its de-

ZOOLOGY.

fence, is not rare in Chili. The perfume is contained in a small bladder, and does not proceed from the urine as supposed. The *culpeu* resembles a fox, and has a singular curiosity to look on mankind, as he never fails to follow and stare at the traveller, though without offering any harm, surprised perhaps to see a biped without feathers. The *puma*, called by the Mexicans *mistle*, is the animal styled a lion by the old writers; for though he have no mane, he somewhat resembles the African lion in shape and roar. His back is generally ash colour, with some sprinkling of yellow, while the belly is whitish; the length from the nose to the tail five feet, height from the top of the shoulder to the fore foot twenty-six inches and a half. The tail is two feet and one inch in length, and resembles that of the tiger. When amorous he hisses like a serpent; and prefers the flesh of the horse to any other. It being usual to couple two horses together in the pastures, to prevent their flight, he will kill one, and drive the other before him with strokes of his paw, till he have carried his companion to a proper recess. The *puma*, which is also called *pagi* in Chili, never dares to attack mankind, and a child may drive him away; but the African lion is equally dastardly, as observed by Mr. Barrow in his account of the Cape of Good Hope, who regards cunning not courage as its attribute. The *cuy*, and the *viscaccia* an animal betwixt a rabbit and a fox, also abound. The vicuña, the *chilique*, and the guanaco have been already mentioned in the account of La Plata. Molina says that these three, with the *paco* and the *glama* of Peru, belong to the class of the camel. A more peculiar quadruped of Chili is the *buemul*, a singular kind of wild horse, with all the forms of that noble animal, except that it has cloven feet. Wallis observed it towards the Straits of Magellan: and he loves to haunt the most retired precipices of the Andes; where, more wild and more swift than the vicuña, the chase becomes extremely difficult.

Most of the European animals have improved in this delicious climate and fertile country; and in fire, vigour, lightness, and beauty, the horses of Chili do not yield to their fathers of Andalusia; nor have the celebrated Spanish sheep here lost any of their qualities. According to Molina this famous breed descends from the African race, which cardinal

cardinal Ximenes brought from Morocco.* Nor has that noble animal Zoology.
man degenerated in Chili. In 1781 died a Spanish knight, Don Antonio
Boza, aged one hundred and six, who had never known sickness, and
had by two wives twenty-eight sons. Molina has also known creols
aged 104, 107, 115. His grandfather and great grandfather, both creols,
died at the age of 95 and 96; and such examples are common even
among the indigenes.† The women are fruitful, and twins common.
A Frenchman, who died in 1764, left by one wife 163 descendants.
Our author joins with Dobrizhoffer in the ridicule of those theorists who
assert the similarity of the American physiognomy. The Boroans, as
already mentioned, have flaxen hair and blue eyes; and a Chilese does
not differ less from a Peruvian than a German from an Italian. The
tribes of Paraguay, Cuyo, and Tehuelia, have all their peculiar lineam-
ents. They have little beard, because it is eradicated; and the hair
of puberty, supposed by Dr. Robertson to be very spare, is on the con-
trary copious, but eradicated like the rest. The arguments against the
vigour and appetite of these tribes are alike unfounded.‡ On the S.
of Chili are the Poyas, a race equal to the Tehuels in stature.

That the sea gradually retreats from the coast of Chili is matter of Natural
annual observation. In some places the land left is two inches, in some Curiousities.
half a foot, especially near the mouths of rivers; where the part left is
the first year covered with loose sand, in the second produces some
herbs, and in the third is completely covered with verdure. The shore
of Chili consists mostly of a plain, five or six miles broad, between the
sea and the maritime mountains; their sides bearing evident marks of
the lowering of the ocean, which has sometimes formed curious grottos

* Might not the original race be still tried, and gradually habituated by being at first restricted
to warm S. W. counties of England? Certainly † the experiment deserves attention, particularly as
the pastures in Morocco, may perhaps approach nearer to the English, or at least not abound in
aromatic plants, so much as those of Spain. The wool of the African kind seems coarse; and it is
probably the change of the climate that occasions the fineness of the fleece.

† Molina does honour to the creol race, for a more clear, scientific, and intelligent account of
of any country was never written by any author of any age or climate.

‡ It is to be regretted that this great writer had ever perused the dreams of Pauw; for he is
seldom vulnerable, except where he follows that idle theorist, whose works are now deservedly for-
gotten.

with

with different chambers, hung with shells or stalactites, where beasts take refuge in the winter.

At the distance of four hundred paces from the mouth of the river Mauli, on the left hand, there is on the sea shore a mass of whitish marble, about seventy-five feet in height, quite detached; the length from E. to W. being 224 feet, and the breadth 54. It is commonly called the Church, and has in fact all the appearance of one, being excavated in the inside into a vault more than one-third of its exterior height, and having three doors of a proportional height and breadth and semicircular form; one at the western end, where the sea, the great architect of this singular edifice, enters, and two lateral doors exactly opposite, through which the sea retires during the reflux. This natural edifice, of which half is still bathed by the waves, serves as a residence for a great number of sea wolves, whose cries resound through the vast concavity; while the top is covered with white sea fowl called *lili*, in size and figure resembling doves. On the coast of the province of Rancagua is another similar, and now free from the sea. The people in the neighbourhood, who call it the Church of the Rosary, wish to have it consecrated for divine service.

In the Andes are many such grottos of great dimensions. Near the source of the river Longavi is seen an oval window, where a man on horseback might stand; and when the solar rays first pass through this aperture in the Andian heights the spectacle is magnificent. In the same mountains is the celebrated bridge of the Inca,* being a mountain pierced through by the river Mendoza. As this mountain is of gypsum, there hang from the vault many beautiful stalactites, produced by the vitriolic salt of that substance.

* Molina, p. 65. For the natural bridge see La Plata.

PORTUGUESE POSSESSIONS.

BRAZIL.

Grand Boundary.—Extent.—Conquest.—Paulists.—Provinces.—Population, &c.—Manners.—Cities.—Commerce.—Natural Geography.—Mines of Diamonds.
 —PORTUGUESE GULANA.

A SHORT description of these extensive territories, over which the weakness and jealousy of the Portuguese continue to throw considerable obscurity, cannot be better introduced than by giving an idea of the line of demarcation between the Spanish and Portuguese dominions. Mr. Arrowsmith, with his usual liberality, and love of the science, communicated to me the following notice, extracted from the original treaty.

GRAND
BOUNDARY.

Line of Demarcation between the Spanish and Portuguese Possessions in South America, as established by the Treaty of St. Ildefonso, 1777.

“ The boundaries of the Spanish and Portuguese possessions in South America were settled by the Treaty of St. Ildefonso in 1777, and its ratification at the peace of Pardo in 1778. These boundaries are formed by a line drawn from S. E. to N. W. by which the country to the N. E. of the said boundary belongs to Portugal, and the territory on the S. W. to Spain.

“ This

PORTUGUESE

GRAND
BOUNDARY.

" This line runs 1st through Paraguay, 2d along Peru, and 3d through the land of the Amazons.

1. *The boundary Line through Paraguay.*

" It begins from the sea, at the little river Chuy, S. lat. $33^{\circ} 40'$; the south west side of the lake Merin being allotted to Spain, and the N. E. to Portugal; so that the lake, and the isthmus between it and the sea, to the extent of certain marks, are neutral; the first mark of Portuguese possession being in $33^{\circ} 3'$, while the Spanish extends to the little creek of Chuy already mentioned.

" The Portuguese province Del Rey retains its original boundary between the sea and the mountains.

" The navigation of the mouth of the Rio Grande, or Port of San Pedro, belongs exclusively to Portugal.

" The Spanish boundaries pass along a chain of mountains, giving birth to many rivers that join the Uruguay, northwards as far as the influx of the Pepiri Guazu, which flows from the N. into the Uruguay.

" The district between the said mountains on the E. of the Uruguay, and the territory Del Rey, is also neutral. But both sides of the Rio de la Plata, together with the colony of St. Sacramento; and the exclusive navigation of the Rio de la Plata, of the Uruguay, and of the streams that fall into it, belong to the Spaniards.

" The sea coasts between the boundary lines are neutral. From the junction of the Pepiri and Uruguay a single boundary divides the two territories. Running northward to the source of the Pepiri, it then crosses the high land to the influx of the St. Antonio into the Equitfu (Iquazu) and down the Equitfu till it join the Parana. It follows that river till it receives the Iguri from the W. then up the Iguri, and along the mountains to the South of the Wendecreis* westwards, over to the river Paraguay, and along that river to Peru, and the Land of the Amazons, lat. $19^{\circ} 40' S.$

* Mbotety.

2. *Boundary along Peru.*

" This passes first along the Paraguay upward, as the former boundaries between Peru and Amazonia, to the lagoon or large marsh of Xarayes, and to the influx of the Jauru on the E. side. From thence turning westwards over to the confluence of the Sarare * with the Guapori or Itenas. It then passes down the Guapori till its union with the river Mamori, then down the Mamori, (which from thence is called the River Madera) to the former boundaries of Peru and Amazonia.

GRAND
BOUNDARY.

" It will hence appear that Portugal has obtained a very large district on the S. E. of Peru."

3. *Boundary through Amazonia.*

" It is formed by the original oblique boundary between Peru and Amazonia, running from the river Madera to the Marañon. But from thence Portugal has lost a small district to the N. W. as the boundaries continue down the Marañon to the western mouth of the Yupura, then up the Yupura to the point where the frontiers of Peru, Amazonia and New Granada unite. †"

It

* A river of Matogrosso, joining the Itenas on the W. of the settlement of St. Francis Xavier.

† The drawing of the parts settled, lent to me by Mr. Arrowsmith, extends from lat. 36° S. including the mouth of the river La Plata, to lat. 19°, where the boundary has reached the river Paraguay. But it is not laid down, except in the space from St. Tecla, lat. 31° 15', to the chain of Taaré lat. 29° 40'. The map is however very curious from the apparent accuracy of the general survey.

It is entitled "*Plano Reducido à Esferico, desde el Cabo de San Antonio, y Boca del Rio de la Plata, en los 36° 10' de Latitud Austral, hasta el Rio Tacuary o Cumapoa, qui desagua en el Paraguay, por los 18° 8' de dicha Latitud; comprehensivo de todos los viajes, trabajos, conocimientos y operaciones, hechos de Demarcacion, fajas, y zonas Neutrales, Rios dudados, y Terranos en disputa, De la Segunda Partida de Lima a España. Del mando de su Comisario el Capn. de Navo. de la Rl. Armada Don Diego de Alencar y Ponce, y del Teniente Coronel del Rl. Cuerpo de Ingenieros, Don Joseph Maria CABRER. Desde su salida de Buenos Ayres por Diciembre de 1783, hasta su regreso à dicha Capital por Octubre de 1801: y suspensiones que fue la Demarcacion, y trabajos de la citada Partida, por causa de la Guerra de Portugal.*"

There is also the following inscription at the top "*Qualquiera que este plano vea, pondrá en justa admiracion victorias, y conversion de Reynos, Pueblos, y Aldeas de Barbaros, y gentes feas, grandes Rios, rios Valles de oro, y plata, Minerales: verán, y otros Arcanos que la Omnipotente mano depositó à contemplar.*"

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There

GRAND
BOUNDARY.

It would appear that the chief object of the court of Spain in this treaty of St. Ildefonso 1777, was to prepare the way for a precise boundary for the projected new viceroyalty of La Plata, which was established in 1778. Hence it became an important enterprize to remove the Portuguese from the proximity of the new capital Buenos Ayres, their colony of Sacramento being situated on the opposite side of the river La Plata, which not only insulting the Spanish power, but being a seat of contraband trade, had been taken and utterly demolished by the Spaniards in 1777. With this view it was a radical object to ascertain the Portuguese boundary in this quarter; and as the Portuguese had no land around the station of Sacramento, which was insulated in the midst of the Spanish territory, while the Spanish province of Buenos Ayres had always been understood to extend nearly as far as the great river San Pedro, it became a matter of equitable decision to adjust the present line. The part settled by actual survey is that which was the most important to Spain; which in return abandoned a portion on the S. E. of Peru, contiguous to the rich Portuguese mines of Matogroso.

There is a chain of mountains of considerable breadth, called the Cordilla de Amambé, which runs between the sources of the rivers Mbeteey and Iguri, &c. from lat. 19° to lat. 24° between the rivers Paraguay and Parana. At lat. 24° to lat. 25° there is a prodigious mass of mountains, covered with thick forests extending on both sides of the Parana. The chain of mountains bends to the S. E. at the great rapids of the river Parana, where it continues its direction towards the E. At lat. 26° there are several settlements between the Parana and the Paraguay, as Villa Rica, &c. on the S. E. of the city of Assumption. Where the Parana receives the Paraguay the latter is not above half the width. On the S. of the Parana, at the distance of about 30 g. miles from its junction with the Paraguay, there is the Laguna Ybera, an oblong square of a very different form from that represented in the map of La Cruz. It is a prodigious marsh of about sixty miles in length and breadth, with twelve lakes disposed at intervals, and probably the whole is inundated in the rainy season. The Abipons are on the other side of the river, lat. 28° 30', on the S. W. of Corrientes. The entrance of the Rio Grande, or San Pedro, seems not to exceed a mile and a half in breadth, but soon opens into the vast lake Patos, fed by the great river Bacacay. The lake of Merin, which is neutral, extends from lat. 32° 10' to lat. 33° 40', or about ninety g. miles in length; but the neutral space between the marks of Portugal and Spain little exceeds forty miles. About twenty g. miles to the W. of Maldonado a little chain of mountains runs N. E. in which are the mines of gold. The sand bank called the *English*, to the S. W. of the river Flores and Montevideo, is not so large as in other maps; and not above a tenth part the size of the sand bank called *Ortiz*, which lies midway between Montevideo and Buenos Ayres.

The

The dominions in South America, held by the small kingdom of Portugal, extend from the frontier of French Guiana, lat. $1^{\circ} 30'$ to port St. Pedro, S. lat. 32° , being thirty-three degrees and a half, or 2000 g. miles: and the breadth, from Cape St. Roque to the furthest Portuguese settlement on the river of Amazons, called Sapatinga, equals, if it do not exceed, that extent.* This vast territory, rivalling the empires of antiquity, is still more unknown than the Spanish possessions, partly from the want of science and curiosity, partly on account of the thick forests which cover the expansive plains of the Marañon, and its auxiliary streams. Though long in strict alliance with Portugal, we have little precise knowledge of Brazil; and still less of the interior country, so absurdly called Amazonia, but more justly by the Spaniards the Land of the Missions, while the best name would be COLONNA, in memory of the great discoverer; for if the error in the general appellation of America cannot be remedied, some recompence might be made by reviving the name of COLON in various important divisions.† The chief settlements of the Portuguese are only thinly scattered along the shores; and the fanaticism of the Spaniards and Portuguese is an invincible obstacle to the population of some of the finest regions of the globe; while by the free admission of all sects, as in the territory of the United States, industry and population would increase with surprising rapidity.

Brazil, as is well known, derived its name from the wood so called, *Discovery*, which is mentioned by Chaucer, and was celebrated for centuries before. This large territory was discovered, by mere accident, by Cabral, a Portuguese admiral, in the year 1500. Standing further to the E. than

* Da Cunha computes the length of the Portuguese possessions, from the river of Piazon in the north, to the river of San Pedro S. at five hundred Portuguese leagues, that is two thousand B. miles; but as there are eighteen Portuguese leagues to the degree, each is not equal, like the Spanish, to four B. miles. He computes the breadth as of the same extent from Cape St. Roque to the most western missions. But those who suppose that Brazil is equal to Europe in size, forget that the ancient continent is about three thousand three hundred B. miles in length, by two thousand three hundred and fifty. In another passage, p. 176, Da Cunha more justly computes the length of the Brazilian coast at six hundred leagues of eighteen to the degree, or about two thousand two hundred B. miles.

† The western portion of the Portuguese empire might well be called *Cabralia*, in honour of Cabral the discoverer of Brazil.

DISCOVERY. usual, in order to avoid the currents on the coast of Africa, he was astonished with the discovery of this large part of the new continent, and immediately sent a ship to Lisbon with the intelligence.* Thus discoveries depend more upon the age than upon the man; and America was not destined to be any longer unknown. The Spaniards pretended to prior discoveries of some parts of the northern shores. As the line of demarcation, prescribed by the pope Alexander VI, was supposed to be drawn from pole to pole, one hundred leagues to the west of the Azores; all the countries discovered to the east of this imaginary line being assigned to the Portuguese; and all on the west to the Spaniards; it became necessary to form new arrangements.† The Spaniards having not long after discovered the Moluccas or Spice Islands, from the west of America, it was agreed by the convention of Tordefillas, that the divisory line should be extended three hundred leagues to the west of the former, so that Brazil might remain in the possession of Portugal.‡ The precise boundary between the Spanish and Portuguese had not been universally fixed when Estalla wrote in 1798; and the editor of Azara's work on the quadrupeds of Paraguay denies that it had been fixed, though Azara was himself one of the commissioners; and, with idle animosity, imputes the failure to the English, and the interest of their contraband trade, carried on in Portuguese vessels with the Spanish colonies. But it is difficult to conceive that this circumstance could have influenced the

* The western coast of Africa had been generally placed three or four degrees too much to the east, that is too far from America. Hence ships generally reach Brazil before they expect to fall in with the coast. Captain Lindley has made some useful observations on the navigation of the coast of Brazil; and has given, p. 294, a table of longitudes and latitudes from Portuguese manuscript charts.

† Robertson, i. 160. See a translation of the papal bull in the *Hist. Gen. du Voy. xviii. 35.*

‡ M. Barbié de Bocage was occupied with the examination of this line; which, however ridiculous, had some effect on the history of geography. In the contest concerning the Moluccas it would seem that another line was understood, at the distance of 180° , or half the circumference of the globe, to be computed from the first line about W. long. 50° from Greenwich, which would extend about 130° E. long. Hence New Holland, though discovered by the Portuguese, was concealed from the world, as it would have belonged to the Spanish division. See also a memoir of Coquebert on the discovery of Nootka in the *Bulletin des Sciences*, par la Société Philomathique, *Frim. An. xii. No. 81.*

decision; and the line is positively asserted to have been fixed, though not formally published. Discovery.

At first the Portuguese only sent a few malefactors to Brazil; and the lands being difficult to clear, were little cultivated. But when the rich mines were discovered, more respectable settlers were allured; and the excellence of the climate, and fertility of the soil were additional attractions. The necessity of perpetual defence against the ferocious natives, occasioned the division of the territory into *Capitanias* or Captaincies, which still exist. Formerly large grants had been assigned to individuals, but the government, feeling the advantages of this colony, sent a governor-general, with missionaries to convert the savages; and the city of San Salvador, or our holy Saviour, was founded about the middle of the sixteenth century, its privileges having been confirmed by John III, who died in 1557. Conquest.

Meanwhile the French, in 1555, had attempted an establishment on the coast of Brazil, which was conducted with their usual colonial prudence, the governor Villegagnon being a warm catholic, while most of the colonists were protestants. Villegagnon having burnt two of his heretical subjects, the others, who had not gone so far with that intention, preferred a return to France, and left the governor without any thing to command, not even his passions. Honest Lery, who, to avoid being burnt, had very nearly been drowned, there being imminent danger of shipwreck from the crazy state of the vessel, has described the country and colony with great naiveté and sagacity.* After Brazil, with the kingdom of Portugal had become subject to the Spanish crown, 1580—1640, the Dutch accomplished a settlement, under the celebrated prince Maurice, and to them we are indebted for the best accounts of this country.† In 1661 they resigned Brazil to the Portuguese, then delivered from the Spanish yoke, for eight millions of florins. The French having formed a settlement in 1640 near Surinam, had abandoned it, as being marshy and unhealthy; but the Dutch, who are ex-

* Voyage en Bresil, Rochelle, 1578, 8vo.

† Barlaei Res gestæ in Brasilia, &c. Cleves, 1650, 8vo. Laet, Piso, Marcgrave, &c. The *Traaktus Topographicus Brasiliae* of Marcgrave, Amst. 1658, folio, is extremely rare.

tremely

CONQUEST. tremely fond of marshes and putrid fevers, greedily seized on the territory, which has flourished like those flowers which grow in water.

The Portuguese settlements naturally extended along the coast, not only from fear of the natives, but on account of the impenetrable forests in the interior. There are now fourteen Captaincies or provinces, from that of Para under the line, to 32° S. lat. a space which, following the winding of the shores, may extend to eight hundred leagues. The missionaries have seldom penetrated into the interior, there being great danger, for most of the tribes are anthropophagi; but their patriotic zeal and perseverance have opened the way to precious discoveries and lasting establishments. Yet the Spanish possessions have been little molested, except by the *Paulists*, or as they are quaintly styled *Mamelucs*, a freebooting society. Their town of St. Paul stands on a hill, about one hundred and fifty paces in height, whence issue two rivulets, one to the S. the other to the W. which afterwards join, and fall into the Hariambú, which passes at the distance of a league to the N. a river full of fish, and capable of receiving large barks, but liable to inundations in the rainy season. On the N. of this river the mountains extend E. and W. for more than forty leagues; while, on the S. W. the chain seems to wind towards the mountains of Chiquitos in the Spanish possessions; the Parana passing with stupendous rapids of twelve leagues, the general breadth of the chain being from twelve to twenty. In the neighbourhood of St. Paul, the mountains present mines of gold of the purity of 22 carats, which is found in irregular masses, and in dust.* The climate is benign, owing to the fresh air from the mountains, but the winter is cold and frosty. United by equal want of religion and morals, the first inhabitants of this town formed a republic, like that of robbers in a cavern. Malefactors of all nations and colours, Portuguese, Spaniards, Negroes, Indians, and all possible mixtures of mankind, formed about a hundred families, which gradually rose to a thousand. The Paulists declared themselves a free people; and the title was certainly most just, as they were completely free from all laws, morals, sentiments, and vir-

St. Paul.

Paulists.

* Estalla, xxi. 314.

tues: but they consented to pay the Portuguese a fifth part of the gold PAULISTS. which they drew from the mines or scours.* All strangers, who did not bring certificates of having been regular thieves, were refused admittance into this hopeful colony; and there was a marked aversion to any multiplication of professions, as they rejected any robber who was at the same time a spy. The first trial of a new citizen, was to make an excursion, and bring in two Indians as prisoners, to be employed in the mines, or digging the grounds. Virtuous actions were carefully punished with death; and no citizen was permitted to retire from the society. Supplied with fire-arms from unknown quarters, they often descended the large rivers, carrying terror and destruction into the Spanish possessions in Paraguay; and an army would have been necessary even to reduce them to the Portuguese domination. Where they suspected that force would not avail, they assumed the black gowns of the jesuits, and preached with great fervour to the Indians, on the advantages of religion and civilization, and the heinous offences of robbery and murder, specially warning them against those devils the Paulists, who were accustomed to breakfast on nuns and little children. When they had catechised a sufficient number, they persuaded them to follow their teachers to a convenient spot, where they would find abundance of all the necessaries of life. The poor Indians accustomed to the same procedure on the part of the jesuits, allowed themselves to be conducted by those wolves in wool, who, when they had conducted them to the trap, seized and carried them off captives. This new mode of preaching began to disgust the savages; and the jesuits found it difficult to avoid the total loss of their character, by the artifices of these new brethren, as the Indians could not possibly distinguish between a Jesuit and a Paulist. To the sword of the faith they were forced to join that of the flesh, and to arm all their converts, not with patience but with fuses. The Paulists began to lose their advantages, both as preachers and as pirates; and the bonds of society having begun to be broken by the introduction of some virtues, the city was yielded to the Portuguese monarchy, which is still contented to receive a fifth part of the mines.

* Lavaderos.

The

PROVINCES. The wide possessions of Brazil are divided into the following Capitaincies, or provinces, proceeding from the north towards the south,

- | | |
|--------------------------|-----------------------------|
| 1. Para. | 9. Sergippé. |
| 2. Maranhao. | 10. Bahia, or Todos Santos. |
| 3. Siara. | 11. Ilheos. |
| 4. St. Catharina. | 12. Porto Seguro. |
| 5. Rio Grande. | 13. Espiritu Santo. |
| 6. Para-Iba, or Paraiba. | 14. Rio Janeiro. |
| 7. Tamaraca. | 15. St. Vicente. |
| 8. Pernambuco. | 16. Del Rey.* |

In the interior of the country Da Cunha, our most recent authority, mentions the governments of St. Paulo, Minas Geraes, Gojas, Cujaba, Matogroso, of all which unhappily little is known.

Rio Janeiro. One of the most remarkable provinces is that of Rio Janeiro, which is one of the three governments into which Brazil is divided. Though there be many mines of gold, sugar is the chief product. The capital of the same name will be afterwards described. The captaincy of Todos Santos, or Bahia, the Bay of All Saints, derives its name from a large and beautiful bay so called, and is one of the chief in the kingdom of Brazil, being extremely fertile in cotton, tobacco, and sugar; the inhabitants have been computed at a hundred thousand.† In this province stands the city of San Salvador. The district of Ilheos, though fertile, is much infested by the savages; it produces abundance of Brazil wood. Paraiba receives its name from a river so called; but there is another in the south with the same appellation. It is also greatly infested by the savages. The harbour of Paraiba is large, but rather dangerous on account of the sand-banks.

The most northern province is that of Para, or Grand Para. The town of Para is so far from standing on the Marañon, that, as Condamine observes, perhaps not a drop of that river bathes its walls. Para

* Da Cunha, 176, names that of St. Catharina, on the N. of that of Rio Grande, a new division. See Commerce.

† Estalla, xxi. 347. whose account of the provinces is however mostly transcribed from Alcedo.

is on the mouth of the great river Tocantin, which receives that called PROVINCES.
 dos Bocas, into which a natural canal from the Marañon (called Tagipuru) has been opened by the violent tides.* This province produces abundance of cotton, sugar, vanilla, chocolate, coffee; a fleet laden with these articles sails annually for Lisbon. The climate is extremely hot; and the woods abound with precious timber of great solidity and brilliant colours, and some trees that yield odorous balsams. The capital, Para, on the Tocantin river, is a rich and handsome town, with two parish churches and a college. Besides a citadel, there is a fortress, with a strong train of artillery, and a garrison of four companies. The adjacent province of Maranhão derives its name from an island, in an estuary formed by various rivers, and on which the chief town is placed. This province yields two harvests of maize annually.

The province of Espiritu Santo is chiefly productive of sugar. That of Tamaraca is the smallest, but one of the most fertile; and there is a commodious haven in an isle of the same name, about three leagues in length. It was formerly conquered by the Petigars. The province of St. Vicente now contains the noted republic of St. Paul; and as it is the first province in which the Portuguese established themselves, so it was one of the most fertile, till the discovery of the mines diverted the channels of commerce. It is now chiefly remarkable for hams, esteemed equal to any in Europe; and if our author be believed, for tanned hides of large swine.† The province of Porto Seguro was the first land discovered by the Portuguese in 1500, and this name of the haven was imposed by Cabral. It was erected into a marquisate in favour of Don Alonzo de Lancaster, descended from the dukes of Aveiro, by Philip II king of Spain and Portugal; in which family it remained till 1758, when it was annexed to the crown. The report having been spread that it contained precious stones, Tourinho proceeded by the river Dulce, and a branch of the Mandi, and afterwards by land for several leagues, till he reached a large lake; whence advancing seventy leagues further to where the river Dulce receives the Aceli,‡ he proceeded along its banks fifty leagues,

* Godin p. 375. The isle, or delta, Marajo, is very fertile.

† Est. xxi. 373.

‡ These rivers, according to La Cruz, belong to the province of Espiritu Santo, where are also the river and hills of emeralds.

PROVINCES. when he found heaps of stones, of various shades between blue and green. The Indians told him, that in the heights they were also found of a red colour, while others contained specks of gold. At the bottom of a mountain covered with trees, and more than a league in length, were found a perfect emerald, and a sapphire; and seventy leagues further many unknown green stones, as was reported by the Indians: who added, that in another mountain, almost wholly composed of rock crystal, there were still larger stones of the same kind. Upon the return of Tourinho, the governor-general Almeida dispatched Adorno for a more exact examination; who confirmed the report, with an assurance, that on the east of the crystal mountain there were emeralds, and on the west sapphires, but they seemed immature. At this conjuncture Portugal became subject to Spain, and the discoveries were lost. The passages are now held by ferocious tribes; and these mountains have not been explored. Near the church of Aguda, in the province of Porto Seguro, there is a fountain said to have sprung from a rock miraculously, as the pious Portuguese believe, when water was wanted for mortar to complete the work. The capital of the same name contains four churches, and is well fortified with a castle, the residence of the governor.

The province of Pernambuco abounds in sugar, cotton, and Brazil wood. The chief town is Olinda, also called Pernambuco. That of Sergipé chiefly produces cattle, grain, and tobacco, for which last Brazil is particularly celebrated. The capital of the same name, was originally called Ciriji, and is the residence of a governor. The province of Rio Grande is so called from the large river which waters it. It was originally possessed by the Tapuyos, who afterwards retired to the west. In the interior there is said to be a large lake, and another, which gives source to the Rio Grande, about twenty leagues in circumference, in both of which fair pearls are found. The captaincy of Siara abounds in cotton, sugar, tobacco, and Brazil wood, the usual staples of the country. The chief town, of the same name, is very small; and the haven so shallow as only to admit little ships. The only remaining province, that of Del Rey, seems rather to be regarded as a frontier district towards the Spanish possessions, than as a regular settlement; that of St. Vicente having been long regarded as bordering on the Spanish possessions.

Of

Of the interior provinces little is known. That of St. Paul, formerly a republic, has already been mentioned. Over that of Minas Geraes, or the General Mines, the Portuguese affect to throw great obscurity, on account of the wealth of the mines. The town of Gojas, or Goyaz, by the map of La Cruz is about lat. $11^{\circ} 20'$, on the parallel of the northern frontier of the province of Bahia. Alcedo is probably exact when he places it on the side of the great river Francisco, the navigation of which seems to be as carefully concealed by the Portuguese, as that of the Marañon by the Spaniards. The mining station of Cuyaba stands on the river of the same name, which joins the river Paraguay beneath the marsh of Xaraes. Alcedo says there are rich mines of gold, which have been wrought by the Portuguese since 1740. Matogrosso is the most inland, and the most celebrated of these provinces. According to Alcedo the Portuguese first took possession in 1761, having discovered the richness of its gold mines, by means of the missionaries, to whose pious and benevolent labours we are chiefly indebted for the discovery of the interior parts of Cabralia, or as it is called by the Portuguese Land of the Amazons, though widely remote even from the river idly so called. A town was erected and a governor appointed. As in mining stations in general the land is barren, and provisions scarce and dear. The climate is hot and moist. It was in vain attacked in 1766 by orders of the viceroy of Peru, the Spaniards being obliged to retreat by the difficulty of the route, and the valour of the Portuguese.

PROVINCES.

Matogrosso.

Rio Janeiro has a decided preponderance over the other governments, since the discovery of the gold and diamond mines about one hundred leagues to the N. W. and the governor assumes the style of Viceroy of Brazil. * "But all the provinces are growing fast into opulence and importance. They manufactured of late several of the most necessary articles for their own consumption; and their produce was so considerable that the balance of trade began to be already in their favour; and remittances of bullion were made to them from Europe, in return for the overplus of their exports beyond their imports." From the same account it appears that the Portuguese settlers have shewn repeated symptoms of revolt from the parent country.

* Staunton's Embassy to China, i. 204.

POPULATION.

The population of this large portion of South America has not been accurately detailed; but it would seem that it cannot exceed one million.* The diamond mines belong exclusively to the crown: and one-fifth of the gold is exacted. There are also numerous taxes and impositions, which instead of enlarging the revenue are the grand causes of its diminution; and the expences of government consume about one-third of the million sterling, which Brazil is supposed to yield to Portugal. †

The Portuguese army in Brazil is said to amount to about 8000 regulars and perhaps 20,000 militia. The conquest might probably be effected by 5000 European troops.

Manners.

The European settlers are in general gay and fond of pleasure; yet, as at Lisbon, extremely observant of the ceremonies of religion, or rather of the etiquette of the Virgin Mary, who is stuck up in a glass case at every corner. Cloaks and swords are generally worn by the men. The ladies have fine dark eyes, with animated countenances, and their heads are only adorned with their tresses, tied with ribbons and flowers. The convents and monasteries are numerous, and the manufactories rare. Labour is chiefly performed by slaves, about 20,000 negroes being annually imported; the price about twenty-eight pounds, while in the West Indies it is seventy; and even the monks and clergy keep black slaves.

A late voyager has thrown considerable light on the state of manners in Brazil. ‡ He is shocked with the indelicacy of the ladies, who amuse themselves with hunting vermin among each other's hair, and shew with great coolness a cutaneous disorder on their hands. The former practice is also common in Spain and Portugal. But to eat without knives and forks, and roll the meat and vegetables in balls, is an oriental practice, which the Portuguese retain; as the women do that of squatting on carpets. The inhabitants of Bahia generally follow the Lisbon fashions, but with an excess of embroidery. § “The usual dress of the

* According to Staunton, i. 195, all the whites in the Brazils were computed at 200,000, the negroes, &c. 600,000.

† lb. 208. For a further account of the revenue see the mineralogy, with which it is intimately connected.

‡ Lindley's Narrative 1805. 8vo.

§ lbid. 271.

ladies is a single petticoat over a chemise. The latter is composed of the thinnest muslin, and is generally very much worked and ornamented: it is made so full at the bosom, that, on the smallest movement, it drops over one or both shoulders, leaving the breast perfectly exposed; and, besides this, is so transparent, that the skin is every where visible underneath. This violation of feminine delicacy appears the more disgusting, as the complexion of the Brazilians is in general very indifferently, approaching to an obscure tawny colour." At mafs a black silk mantle covers the whole person. The negro women are laden with chains of gold round the neck. Even the Portuguese acknowledge the remark, "that Brazil, considering the number of years it has been colonized, the space it occupies, and the inhabitants it contains, exhibits the greatest deficiency of genius and curiosity, perhaps, on the globe; at least there are no exertions to evince these qualities." There is a remarkable want of subordination, especially among the white servants, so as not to be exceeded by the jacobin epoch of France. They also seemed in general to admire the French generals and conquests; and to entertain an invidious antipathy, as our author expresses it, against the maritime power of England, which they considered as administered with too much insolence and contempt of other nations.

The youth in particular seem imbued with republican notions, and ridicule their own subjection to Portugal; a report confirmed by Sir George Staunton. Speaking of Bahia or San Salvador our author observes, "In reality I never saw a country where the inhabitants are so completely neglectful of cleanliness as in Brazil. The houses belonging to tradesmen and shopkeepers are still more disgusting: instead of glazed windows, they have wooden drop lattices, which want even the addition of painting to enliven or preserve them. The lowest order of soldiers, mulattoes, and negroes, have tiled cabins, open to the roof, with a single lattice window. These several and different buildings (with the exception of a street or two) are all intermingled throughout the city, and exhibit a motley and disagreeable appearance." The want of probity, and prevalence of low cunning, have deeply impressed our author; who repeatedly remarks the enmity of the Portuguese,

MANNERS. and their wish to withdraw from any dependence on Great Britain, in which they might probably be indulged, without much inconvenience to their protectors.

Cities.
Bahia.

The city of San Salvador, or as now commonly called Bahia, on the eastern side of the entrance of the grand bay of Todos Santos, was long the most commercial, and may still be regarded as the capital city of Portuguese America, though the mines in the south have conferred new importance on Rio Janeiro. It is founded on a rocky and unequal situation, often six hundred feet above the sea, and mostly impracticable for carriages, whence the chief people go in palanquins carried by two negroes on their shoulders. This strong situation is also well fortified, but the garrison and artillery are often inadequate. The imports are chiefly linen, woollens, silk, hats, wheat, rice, flour, port wine, furniture, negroes, oil, cheese, &c. in return for gold, sugar, tobacco, Brazil wood, skins, balsam of Copaiba, ipecacuana, and other drugs. The mob possess a coarse pride, but the other classes are courteous; and the women used to live more retired than in Portugal, seldom going out except to hear mass on Sundays and festivals. There are about two thousand houses mostly of stone. Some planters have five hundred slaves, who are so much worked and so ill fed, that if they survive seven years, it is esteemed a miracle. The cathedral is of tolerable architecture, and most richly decorated. From a platform in front, there is a beautiful view of the superb bay, with its islands and lively commerce. San Salvador is an archiepiscopal see. The Portuguese government is jealous of the commerce, and does not permit the intrusion of strangers. Provisions are here extremely dear, and the climate rather unhealthy.* The inhabitants of Bahia have been recently computed at one hundred thousand, including the suburbs, thirty thousand being whites.†

Rio Janeiro.

The city of Rio Janeiro has some magnificent buildings, among which is the cathedral. The streets are broad, clean, and handsome; and the market abounds with the pot herbs and flowers of Portugal. It is almost surrounded with gardens; and there are not less than a hundred sugar mills, though many have abandoned that business to undertake

* Estalla, xxi. 354.

† Lindley.

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gold mines. The number of cattle and sheep in the surrounding fields **CITIES.**
is prodigious; and they make a delicate cheese like that of Alentejo.
This is the most commercial city in Brazil, and every year a fleet richly
freighted sails for Lisbon. There is also a mint in which the gold of the
mines is coined, which is of a purity esteemed throughout Europe.
The harbour is excellent, and not ill defended. Without there is an
isle styled that of Villegagnon, from the unfortunate leader of the French
to Brazil, who established himself here in 1555, but was ejected by
the Portuguese in 1558. The discovery of the Rio Janeiro by Solis in
1516, on the first day of January, led to the imposition of the name.*

The harbour of Rio Janeiro is capacious and excellent; and surround-
ed by a fertile country. It is protected by the castle of Santa Cruz,
erected on a huge rock of granite. On the west is the city of St. Sebas-
tian, commonly called Rio de Janeiro, built on a tongue of land, the hills
and rocks behind being crowned with woods, convents, houses and
churches.† On a small isle are a dock yard, magazines, and naval
storehouses; and there are several other isles in the harbour behind the
town. The streets are generally strait and well paved. Water is sup-
plied by an aqueduct, on the Roman plan; for, notwithstanding the
name, there is no river of any note. The shops were full of Manchester
goods, and English prints. Yet the situation of this beautiful city is
said to be unhealthy, owing to the exhalations from the primitive inland
forests. There are manufactures of sugar, rum, and cochineal; and
several districts produce cotton, indigo, coffee, cacao or chocolate, rice,
pepper, and the noted Brazilian tobacco. The red or Brazil wood is the
property of the crown. The natural history has been little explored:
the circumjacent rocks are granite, white, red, or deep blue, the last
being of a close and hard texture.

A curious essay has recently appeared on the commerce of the Por- **Commerce.**
tuguese colonies, written by Da Cunha, the worthy bishop of Fernam-
buco.‡ It is truly singular, that in this essay, written by a Portuguese

* *Essaia*, xxi. 348.

† *Staunton*, i. 175.

‡ *A Political Essay on the Commerce of Portugal and her Colonies, particularly of Brazil, in South America*, by J. J. Da Cunha de Azaredo Coutinho, Bishop of Pernambuco, and Fellow of the Royal Academy of Sciences of Lisbon, translated from the Portuguese. London, 1801, 8vo. From the type this translation is evidently printed in Germany, and probably at Hamburg.



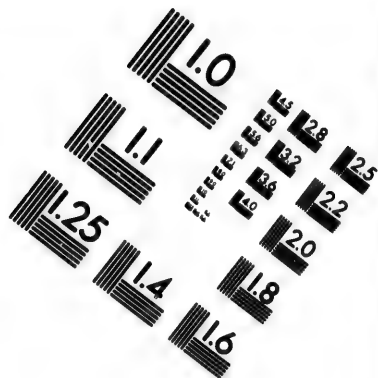
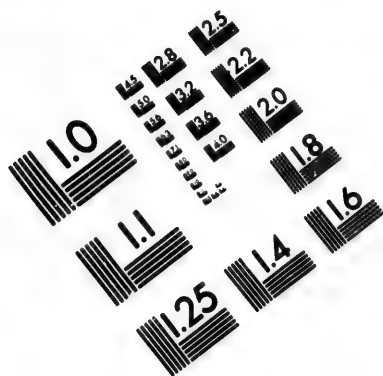
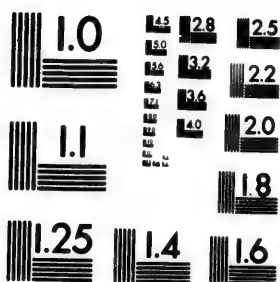


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COMMERCE. prelate, no author, concerning Brazil, should be quoted later than the seventeenth century; and that the chief authority is Lery a Frenchman, who wrote an interesting account of Brazil about 1560. Another proof, if any were wanted, of the degraded state of literature in Portugal, where the inquisition and the priesthood, totally ignorant themselves, throw a thick darkness over the people, that their thefts may not be observed. But some observations which illustrate the present state of the country must not be omitted. Da Cunha observes, that in the country of the mines; or *Minas Geraes*,* salt becomes so indispensably necessary, that not only men, but cattle, and other animals require it for their food, as though the fields near the mines abound in grass, the animals would otherwise often refuse it. Yet salt is farmed to an individual, to the equal loss of the community and the royal treasury; and a vast commerce in fish, which swarm on the coast of Brazil, is thus interdicted. Let us not however smile at the folly of the Portuguese government, for Scotland suffered nearly a century under a similar restriction. The worthy prelate well contradicts the theory of Montesquieu concerning the influence of climate; and even asserts, that it is borrowed without acknowledgement from Bodin's *Manner of studying History*, and Charron's *Treatise on Wisdom*. He shews that the indigenes of Brazil are capable of great mental and corporeal exertion; and that it was principally by the management of Indian chieftains that the Portuguese recovered Brazil from the Dutch. The Ouetaçazes have distinguished themselves by their bravery; and warmly defended their fields against the Portuguese, who pretended grants, till they were acknowledged in 1750, the immediate subjects of the crown of Portugal.† The trade in timber is also a favourite object of Da Cunha; and he prefers the *nagatree*, the *ipe*, the *guramirim*, and *fucupira*, which chiefly grow in Amazonia, to the strongest and best timber in Europe.‡

* The word *Geraes* merely implies general, universal. *Ventos Geraes* are the trade winds; *Escolas Geraes* are the common schools; the Portuguese putting *geral* for *general*.

† From p. 88, it appears that the Ouetaçazes (perhaps the Guayazas of La Cruz) inhabit a large tract, about one hundred leagues in length, from the N. bank of the river Paraíba to the river Xipota, near Villa Rica (in Rio Janeiro.)

‡ Amazonia is as ridiculous a denomination for the Portuguese part of the interior, as for the Spanish. I have proposed that the Spanish part be called *Colonna*, in honour of Colon the great

It is somewhat singular that our respectable prelate, in his zeal to increase the industry of Brazil, has entered into a defence of the slave trade. He desires to remind his readers of the tyrannical governments in the north of Europe, where the peasants, not of a different and inferior race like the negroes, but the very brethren of their masters, are held in a state of vassalage, and sold with the lands: he adds that a Russian monarch will present thousands of slaves to a general, and a genuine Russian will even sell himself: and he insinuates that legislators would be far better occupied in considering the state of the poor in their own countries, where perhaps a quarter of the population is in the work-house, than in travelling like the heroes of romance, in search of ideal misery, while they forget domestic and real distresses. He seems rightly to think that the breed of Europeans is of far more importance than that of negroes; and cannot see the congruity when the protectors of the Africans are spreading all the horrors of war and devastation among their own brethren, of the same family, and the same religion.

Considering the Minas Geraes, or General Mines, as a source of industry, our author observes that when they first began to be opened,* there was considerable opposition on the part of the Indians, who were not completely pacified till 1758, when Teixeira inspector of the royal treasury at Villa Rica employed a friar as mediator. But in 1767, when Silva was governor of Minas Geraes, the Cujito Indians, commonly called Botocudos and Gamelas, ravaged some settlements on the northern bank of the river Pereicaba; but were repelled by the friendly Indians, to the river Marañon and the banks of the Meari, near Maranhão. Our author justly regards the agriculture as a principal object; and the fertility of Brazil is remarkable. The province of Rio

great discoverer of America; and in like manner, that the Portuguese portion be styled Cabralia, in honour of Cabral the discoverer of Brazil. It is high time that men of science should begin to assert their authority, in opposition to that of ignorance and absurdity.

* "When they began to open mines, and dig for precious metals," says our author. In like manner, in a letter of the French Ambassador at Lisbon 1746, which the author has seen in the library of the arsenal at Paris, it is mentioned, that a new and very rich vein had been discovered in a mine of Brazil. Yet Correa wishes to persuade us, that there are no mines in Brazil, but that the gold is found in the sands of the rivers! The Portuguese, not contented with their own ignorance, wish to diffuse it, and then ridicule those whom they deceive.

COMMERCE. Grande might alone supply a great part of Europe with wheat, hemp, and other products. Our author regards this province as the richest in Brazil, as it also produces such abundance of cattle that they are slaughtered for the hides, and great numbers of horses.* It is to be regretted that the river whence it derives its name is little navigable, on account of the shoals. The new province of San Catarina, which adjoins on the north, serves as a staple or mart for the products of Rio Grande, by its excellent harbour, which is the best in Brazil after that of Rio Janeiro.

The remarks of Da Cunha on the trade between England and Portugal are truly curious. In his idea the noted treaty made by Sir Paul Methven, has been of great advantage to England, while Smith and our best political writers have shewn it to be detrimental. England in the opinion of our Portuguese author depends more on Portugal, than Portugal on England;† while in fact the very existence of Portugal has repeatedly been preserved by this country, and the gratitude of the Portuguese, especially in Brazil, has been shewn by seizing our ships on frivolous pretences, and imprisoning our officers and seamen. They alledge the universal jealousy of all nations at our naval superiority: but, as to that superiority Portugal owes her preservation, it is truly singular that they should complain; and equally singular that there should be no British consuls in Brazil for the protection of our commerce. Concerning the commercial treaty with England, Du Cunha thus argues.

“ If Portugal were to exempt all nations, without distinction, from paying duties on woollen goods imported, and reduce every thing to the same footing, on which it was previous to that prohibition, she would not only create herself as many new friends and allies, as would find their advantage in the commerce with the Portuguese; but she would augment, at the same time, in her markets, the number of competitors, who would not only sell to them the products of their industry and manufactures cheaper, but even purchase the products of Portugal dearer than the English. This would certainly be striking a violent blow against

* P. 176. That able minister Pombal, instituted manufactories in Portugal, for the support of the colonies, which are now nearly matured.

† Ibid. p. 185.

the British trade; for since the hand-labour of the English workmen is COMMERCE. so uncommonly dear, partly on account of the national wealth of the English, partly by reason of the manifold taxes, with which the people of England are loaded, in order to enable them to pay the interest of the national debt, the British merchants would no longer enter into competition in the Portuguese markets with those of other nations, without its causing them material injury."

In Brazil the rainy season, as already mentioned, begins in April and ends in August. This is called the winter, though in fact the heat be equal or superior to that of the dry season or summer. These terms are so arbitrary in South America that if it rain in the morning, the expression is "what a dreadful winter!" and if the sun shine in the afternoon "what a beautiful summer!" The soil teems with fertility, and rather requires to be exhausted than to be manured. The Marañon has been already described in the general account of South America; and of the other grand rivers, the Tocantim and St. Francisco, there are no accurate accounts. The chief chain of mountain passes westward from the government of St. Paul; but there are several other chains in the northern provinces, which have not been described.

Natural
Geography.

The jealousy and inertness of the Portuguese government have BOTANY. effectually prevented any regular and scientific account of the natural productions of their vast and opulent dominions in South America; and the few scattered fragments of Brazilian botany are chiefly to be collected from the journals of those navigators who have touched at Rio Janeiro, and from the *Flora Lusitanica* of Vandelli, which contains a few plants of Brazilian origin. The esculent plants are such as are common to all the tropical regions of America, among which may be distinguished the plantain, the banana, the cocoa nut, the chocolate nut, the yam, potatoe, cassava, together with numerous species of melons and gourds. Of fruits the number is scarcely to be reckoned; the principal of them however, such as the pine apple, the mango, and the tamarind have already been repeatedly mentioned in the account of the botany of the East and West Indies. The warm aromatic plants that are found here in a truly indigenous state, and are much used by the inhabitants as condiments to their food, or the basis of various drinks, are the ginger, the turmeric,

BOTANY.

turmeric, several species of pepper, American coffee, capicum or Guinea pepper, and the wild cinnamon (*Laurus canella*.) Several medicinal plants of high estimation, though not peculiar to Brazil, yet grow here spontaneously and in abundance; these are the contrayerva, the Indian pink, (*Spigelia anthelmintica*) the mechoacan, the jalap, the amyris yielding the gum elemi, and the guayacum. Woods for ornamental cabinet work, or for the use of the dyers, which are at present furnished by the more enterprising activity of the Dutch, French, and English colonists of Guiana and the W. Indies, might be procured in equal perfection and variety from Brazil; such are the logwood, fustic, mahogany, ebony, Brazil wood, rose wood, sattin wood, and a multitude of others. The merely ornamental plants are almost wholly unknown, but the Brazilian myrtle, the scarlet fuschia, and the incomparably splendid amaryllis formosissima, compose a most promising sample of the hidden treasures of this delightful country.

Zoology.

The zoology of Brazil differs little from the other parts of South America. Piso, Margrave, and other authors who have written the natural history of Brazil in the seventeenth century, when that country was subject to the Dutch, give ample illustrations on this and other topics, though not with the precision of modern science. One of the most common animals is the tapirosso, or tapir, of a reddish colour, in form and size approaching to a small cow without horns, while the feet resemble those of the ass. Hence some old writers have called it the progeny of the ass and the cow. There is also a small deer with short horns. The boar, as usual in America, has an aperture on the back. The tatou of Brazil is the armadillo. The jaguar or American leopard does not seem so common as in the western regions. The monkeys are very various; and the sloth no uncommon animal. The large serpent called boya or giboia, is said sometimes to swallow a deer entire; and the other kinds of serpents are so numerous as to abound even in the houses. Among the birds the ouira is common in Maranhao, and is said to double the size of a large eagle.* While in strength and size he perhaps exceeds the condor, his plumage is said to be to-

* Hist. Gen. de Voy. xx. 576.

tally different, and to be variegated like the guinea fowl. The salian is ZOOLOGY.
about the size of a turkey, with the beak and legs of a stork; but he cannot use his wings more than the ostrich, yet runs so swift that he is only taken in snares. Other birds resemble pheasants and partridges, and there is a pigeon of peculiar beauty. The arat, variegated with blue and scarlet, and the canidi with blue and gold, are birds of surprising splendour. But it would be endless to repeat the brilliant birds of Brazil. Numbers of excellent fish swarm on the shores.

M. Bougainville, in his account of his voyage round the world, MINES.
seems to have collected authentic information concerning the mines and revenue of Brazil.

"Rio Janeiro is the staple and principal outlet of the riches of Brazil. The mines called General, are the nearest to the city, at the distance of about seventy five leagues. They yield to the king, every year, for his right of fifths, at least a hundred and twelve arrobas of gold; in 1762 they yielded a hundred and nineteen. Under the captaincy of the General Mines, are comprehended those of Rio do Morte, of Sabara, and of Serro-frio. The last besides gold, produces all the diamonds that come from Brazil. They are found at the bottom of a river, of which they turn the course, in order to separate from the pebbles in its bed, the diamonds, topazes, chrysolites, and other stones of inferior quality.

"Of all these stones, the diamonds alone are contraband: they belong to the undertakers, who are obliged to give an exact account of the Diamonds.
diamonds found, and to place them in the hands of the Intendant appointed by the king for this purpose, who deposits them immediately in a casket encircled with iron and shut with three locks. He has one of the keys, the viceroy another, and the assayer of the royal treasury the third. This casket is enclosed in a second, sealed by the three persons above-mentioned, and which contains the three keys of the first. The viceroy has not the power of visiting its contents. He only consigns the whole to a third strong coffer, which he sends to Lisbon, after having set his seal on the lock. They are opened in the presence of the king who chooses what diamonds he pleases, and pays the price to the undertakers at the rate fixed by their agreement.

MINES.

"The undertakers pay to his most Faithful Majesty, the value of a piaſtre Spaniſh money, each day, for every ſlave employed in ſearching for diamonds; and the number of theſe ſlaves may amount to eight hundred. Of all kinds of contraband trade that of diamonds is the moſt ſeverely puniſhed. If the offender be poor, it coſts him his life; if he has wealth ſufficient to ſatisfy the law, beſides the confiscation of the diamonds, he is condemned to pay twice their value, to one year's imprisonment, and is afterwards baniſhed for life to the coaſt of Africa. Notwithſtanding this ſeverity there is a great contraband of diamonds, even of the moſt beautiful, the hope and eaſe of concealing them being increaſed by the ſmall ſize of the treaſure.

Gold.

"The gold drawn from the mines cannot be carried to Rio Janeiro, without being firſt brought to the ſmelting houſes eſtabliſhed in each diſtrict, where the right of the crown is received. What reſults to private perſons is remitted in bars, with their weight, number, and the royal arms. All this gold has been aſſayed by a perſon appointed for this purpoſe, and on each bar is imprinted the ſtandard of the gold, ſo that afterwards in the coinage the operation neceſſary to eſtimate their due ſtandard may be eaſily performed.

"Theſe bars belonging to individuals are regiſtered in the factory of La Praybuna, thirty leagues from Rio Janeiro. In this ſtation are a captain, lieutenant, and fifty men: here is paid the right of fifths; and beſides a toll of a real and a half per head on men, cattle, and beaſts of burden. Half of the product of this duty belongs to the king, and the other half is divided between the detachment according to rank. As it is impoſſible to return from the mines without paſſing by this office, all perſons are there ſtopped, and ſearched with the greateſt ſeverity.

"Individuals are afterwards obliged to carry all the gold in bars, which belongs to them, to the mint of Rio Janeiro, where the value is given in coin, commonly in half doubloons, each worth eight Spaniſh dollars. Upon each of theſe half doubloons the king gains a dollar, by the alloy and the right of coinage. The mint of Rio Janeiro is one of the moſt beautiful which exiſt; it is furniſhed with every convenience to work with the greateſt celerity. As the gold arrives from the mines

at the same time that the fleets arrive from Portugal, it is necessary to accelerate the work of the mint, and the coinage proceeds with surprising quickness.

" The arrival of these fleets renders the commerce of Rio Janeiro very flourishing, but chiefly that of the Lisbon fleet. That of Porto is only laden with wines, brandy, vinegars, provisions, and coarse cloths, manufactured in that city or its environs. Soon after the arrival of the fleets, all the merchandise brought is taken to the custom-house, where it pays ten *per cent.* to the king. It is to be observed that at present, the communication of the colony of St. Sacramento with Buenos Ayres being severely prohibited, these rights must experience a considerable diminution.* Almost all the most precious articles were sent from Rio Janeiro to the colony of Sacramento, whence they were smuggled by Buenos Ayres into Chili and Peru; and this fraudulent commerce was worth every year to the Portuguese more than a million and a half of dollars. In a word, the mines of Brazil produce no silver; all that the Portuguese possess is acquired by this contraband trade. The negro trade was also an immense object to them. It is impossible to compute the loss occasioned by the almost entire suppression of this branch of contraband trade. It occupied alone at the least thirty vessels in the coasting trade from Brazil to La Plata.

" Besides the ancient right of ten *per cent.* paid to the royal custom-house, there is another of two and a half *per cent.* imposed under the title of free gift, since the disaster at Lisbon in 1755. It is paid immediately on leaving the custom-house, whereas a delay of six months is granted for the tenth, on giving good security.

" The mines of St. Paolo and Parnagua yield to the king four arrobas for the fifths every year. The most distant mines, as those of Pracaton and Quiaba (Cuyaba), depend on the captaincy of Matogrosso. The fifth of the above mines is not received at Rio Janeiro, but that of the mines of Goyas is deducted. This captaincy also possesses diamond mines which are forbidden on be worked.

" The whole of the expence of the king of Portugal at Rio Janeiro, for the payment of the troops and civil officers, and for the charges of the mines,

* The colony of St. Sacramento has since been destroyed.

the

MINERALOGY.

the maintenance of the public buildings, the careening of vessels, amounts to about six hundred thousand dollars. The expences of building ships of the line and frigates there stationed are not included.

"Recapitulation, and the amount of the average of different objects of royal revenue."

"A hundred and fifty arrobas of gold, the average produced by the royal fifths, are in Spanish money		Dollars.
		1,125,000
The duty on diamonds	-	240,000
The duty on coinage	-	400,000
Ten <i>per cent.</i> from the custom-house	-	350,000
Two and a half <i>per cent.</i> of free gift	-	87,000
Right of toll, sale of employments, offices, and generally all the profits of the mines	-	225,000
Duty on slaves	-	110,000
Duty on fish oil, salt, soap, and the tenth on the provisions of the country	-	130,000
Total		2,667,000

"From which, deducting the above expences, it will be seen that the king of Portugal draws from Rio Janeiro, a revenue exceeding ten millions of French livres."*

An eminent Portuguese mineralogist, d'Andrada, has published an interesting memoir on the diamonds of Brazil.† He observes that Brazil borders to the W. on deserts and forests held by savages, while in the interior there are great chains of mountains, mingled with superb vallies and large fertile plains. Numerous rivers intersect wide forests of valuable timber. Brazil, says d'Andrada, is divided into four mineral *comarcas* or districts, which proceeding from S. to N. are, 1. St. Joao del Rey. 2. Villa Rica. 3. Sabara. 4. Serro do Frio, or the Cold Mountains, which last not only produce diamonds, but are also very rich in mines of

* 416,666'.

† In the first part, the only one ever published, of the *Attes de la Societé d'Hist. Nat. de Paris*, Paris, 1792, folio.

iron,

iron, antimony, zinc, tin, silver, and gold. The Paulists, or people of the government of St. Vincent, contributed greatly to the discovery of the interior, always going armed to defend themselves against the savages. Antonio Soary, a Paulist, was the first who visited Serro do Frio. The mines of gold were first disclosed; but diamonds were afterwards discovered in the Riacho Fundo, and next in Rio da Peixe. The diamonds are supposed originally to exist in the mountains, but they are more easily found in a bed under the vegetable earth, disseminated and attached to a gangart more or less ferruginous and compact. The diamond mines are farmed to individuals; and the negroes employed may amount to seven or eight thousand. He adds, that diamonds are often found in the soil of the mountains, in beds of ferruginous sand and pebbles, forming an ochraceous pudding stone, of the decomposition of emery, and what is called boggy iron ore. This pudding stone is termed *caschalo*; and underneath there is a schistus, somewhat arenaceous, and sometimes indurated ore of iron. In the *caschalo* is also found gold in grains. It will readily occur to the reader, that the diamonds of Hindostan are also found in ferruginous sand. Iron also accompanies gold, and most other metals, so that a theorist might argue, that they are all modifications of iron.* It is also remarkable that most of the metals are generally found together in the same mine. D'Andrada adds that diamonds have also been found in other provinces of Brazil, as Cuyaba, and St. Paul; but promising no superior advantages the mines have not been explored.

This is the most authentic information which has appeared concerning the mines of Brazil. They are situated in the mountains which give source to many streams that flow north and south, into the river Tocantim, on one side, and the Parana on the other, but there are mines of gold as far inland as the river Cuyaba, which flows into the Paraguay, and even near the river Itenas.† The diamond mines are near the little river

* Buffon, Min. iii. 260, says he is far from placing entire confidence in Parmentier, *Recr. Chim.* i. 339, who pretends to have turned mercury into gold by the acid of tartar: but, p. 348, he says that gold and silver may be produced from iron, scorified with sulphur, refreshed with lead, and afterwards melted in a coppel.

† Others are near the river Peixe, and Saguitinhonha, the Riacho-Fundo, and Guarapara in St. Paul's. MS. Inf.

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Total	2,667,000

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MINERALOGY.

river of Milho Verde, not far from Villa Nova do Principe, in the province of Serro do Frio, S. lat. according to La Cruz 17° , about long. 44° W. from London. This singular substance is not certainly known to be produced in any other part of the world, except Hindostan, and chiefly about the same latitude, 17° N.; but the diamonds of Brazil are not of so fine a water, being often of a brownish obscure hue. The river of St. Francisco is remarkable for passing a considerable way under ground, after it has attained a great size.*

Coleti gives the following list of the mines of Brazil.

Cuyaba, *Diamonds*.

Geraes, *Gold*.

Guayaz, *Diamonds*.

Mato-grosso, *Gold*.

Picurd, *Silver*.

In the curious catalogue of the minerals belonging to Davila, a gentleman of Peru, Paris, 1767, 3 vols. 8vo. there is, il. 109, red amianthus from the mines of Brazil, marked as extremely rare: and, il. 160, little black garnets from the mines of Brazil, where they often appear six feet above the diamonds. There is also, p. 275, diamond of Golconda in a gangart of iron ore, with little grains of quartz.

* Adams in Ullos, English translation, il. 329.

Mr. Lindley's Narrative, 1805, presents some notices which may not be uninteresting, in the deficiency of materials concerning this country. He assures us, p. 104, that the blitter or Seville orange, is a native of America, whence it was carried to Seville. There are great unwrought mines of nitre to W. S. W. of Bahia. He says, p. 162, that no vessels ought to approach the coast on the S. of Bahia, within half a degree, as all our charts are very defective in that part. The rainy season, p. 173, sets in about the middle of April; and the winter is commonly as mild as in European September. The American camels, glama, vicuna, &c. are totally unknown in Brazil, and even in Paraguay, as would appear from the work of Azara, who has omitted them. Our author says, that the captaincy of Porto Seguro extends on the N. to the *Rio Grande*, where it meets the captaincy of Ilheos, or of the Seaholms. But these *Rios Grandes* create great confusion in Spanish and Portuguese geography, the name *Great River* signifying nothing. This *Rio Grande*, and the adjoining Pativa, supply excellent timber for the royal docks, one kind resembling the teak of India, while Brazil wood, logwood, mahogany, rose wood, and others also abound. This *Rio Grande* has not been explored, but is supposed to rise beyond the mines of Petangui, in the Serro do Frio, and is navigable for a great space. The Portuguese settlements seldom extend more than ten leagues inland. Captain Lindley has given, p. 295, a table of longitudes and latitudes on the coast of Brazil, taken from recent manuscript Portuguese charts.

P O R T U G U E S E G U I A N A .

THE most recent geographers begin justly to consider Guiana, or the vast territory between the Marañon and the Orinoco, as a detached country, separated even from the Portuguese possessions in Brazil, by the prodigious flood of the Marañon. Hence the appellations of Spanish, Portuguese, Dutch, and French Guiana, begin to be universally admitted in exact geography.

Concerning the Portuguese portion of Guiana still less is known than concerning the Spanish. Its length may be computed from the mouth of the Arowary to the vicinity of the Rio Negro, about eleven degrees or 660 g. miles; while the medial breadth, from the mountains of Tumucurag to the Marañon, may be four degrees or 240 g. miles. The greater part of this extensive and valuable country is held by savage tribes, whose very names are little known; but the Portuguese, from their convenient station at Para, on the mouth of the Tocantim river, have opened considerable intercourse with the shores of the Marañon, and founded several stations, chiefly missionary, as far as the Rio Negro. The little fortress of Macapa, on the N. or rather W. of the mouth of the Marañon, was founded by the Portuguese in 1688; and though the French pretended a title, the right was confirmed by the treaty of Utrecht 1713. On ascending the course of the Marañon, there also occurs the fortified village of Paru: and at a noted strait of the Marañon there is the little fortress of Pauxis. Where the Rio Negro joins the Marañon, the Portuguese have a fortress, lat. $3^{\circ} 9'$, according to Alcedo, who adds that they thence capture Indians to employ in their mines; and that there are many missions of the Portuguese Carmelites along the Rio Negro. The other Portuguese settlements in Guiana, are chiefly missionary stations, which, by the recent account of Depons, as already mentioned, approach to the Spanish fortresses of San Carlos, on the Rio Negro. Such are the imperfect notices concerning this country, over which the Portuguese throw their usual darkness.

DUTCH POSSESSIONS.

THE Dutch and French possessions in South America are of very small consequence, when compared with those of the Spanish and Portuguese. They have besides been injudiciously placed in flat countries, and the most unhealthy climate of the whole continent whence they are rather graves of Europeans, than of any real advantage to the parent countries.

The Dutch possessions in Guiana commenced in 1663: but four years afterwards they were expelled by the English, whose descendents form part of the colony, resumed by the Dutch in 1676. Dutch Guiana is to the N. W. of the French settlement, and is often called Surinam, from a river of that name, on which the capital is situated. The length S. E. to N. W. is about 350 B. miles, along the shores of the Atlantic; but the breadth only 160.

The chief towns are Paramaribo, on the west bank of the Surinam, also called the Zeeland river, and new Middleburg, near the N. W. extremity of the colony: Demerara is a settlement on a river of that name. The white inhabitants of the capital are computed at 1800.

By the account of Captain Stedman, Paramaribo is a considerable town, of about five thousand souls, in a pleasant gravelly situation, on the banks of the river Surinam, which is here about a mile in breadth. The manners of the Dutch inhabitants have greatly relaxed from the Calvinistic severity of their country; and the ladies are not only amorous, but in the calculation of gain, will call their most beautiful female slaves, and offer the choice to a stranger at a fixed price. Many of the men have also their harems; and the Dutch and creol ladies complain that they are neglected, their admirers being attracted by the Mulatto girls, the Quarterons, the Zambos of a deep glowing copper, with curled hair,

the products of a negro and an Indian, and even by the coolness of the negro skin in a hot climate. From Dr. Pinckard, who has also recently given an amusing account of the state of manners in Dutch Guiana, it appears that Fort St. Andrew, on the eastern bank of the river Berbiz, is in an isolated situation; though at the distance of a mile and a half, a town called Amsterdam is now building, the future capital of the colony of Berbiz.* The mouth of the river Demerara is defended by Fort William Frederic; and the woods are so intricate, that though the distance be inconsiderable, the only passage is by water. Paramaribo is protected by the fort New Amsterdam, at the confluence of the rivers Surinam and Commewine, which are fed by numerous small streams, here called creeks. New Middleburg, on the river Poumaron, is also defended by a small fortress; and there are two or three military stations on the great river Esquivo, which, at its mouth, receives the Demerara.

The largest river is the Esquivo N. W. which receives the short stream of the Demerara. The Berbiz and Corentin are also considerable rivers.

An English medical gentleman, who resided here for some years, has published a good account of the natural history of Guiana; and Captain Stedman, who was employed in reducing the revolted negroes in 1774, has added yet more largely to our knowledge.† But the restricted nature of this work will only admit a few brief hints. The wet and dry seasons alternate, each for three months. No mines have been discovered by the Dutch, who always prefer certain returns; and are far from being in sufficient force to contest the inland parts with the savages and Spaniards. Yet from the river Esquivo there is no difficult access to the lake of Parima, the fatal object of the wishes of Sir Walter Raleigh.‡ Bancroft confesses, that they never penetrate even the lower forests.

* Notes on the West Indies, London, 1806, 3 vols. 8vo.

† Bancroft's Natural History of Guiana, 1769, 8vo. Stedman's Surinam, 4to.

‡ He attempted to penetrate by the river Caroni, which rises N. of the lake, and flows into the Orinoco. The sands of this lake were supposed to be of gold, and in the vicinity was the fabulous golden city Manoa del Dorado. Such fables display the imagination of the early Spanish writers, the natives of Guiana being mere savages, who never saw a village, and even the site of the supposed city.

forests. The silk cotton-tree is often twelve feet in circumference, and hollowed into canoes of considerable burden. The Lauba is a peculiar amphibious animal, but of small size; and what is called the tiger, is of a greyish brown, variegated with black longitudinal stripes from head to tail: our author adds, that they are somewhat less than those of Africa; but the course of the stripes indicates a different species. One snake is described thirty-three feet in length, and three feet in circumference.

The natives are of a reddish brown, or copper colour, like the other American tribes. Those towards the coast are Caribs, who being called in as auxiliaries to suppress a negro revolt, devoured the bodies of the slain.* Our benevolent philosophers, who argue against the existence of cannibals, might as well deny the existence of savages; but nothing is more absurd than a wise theory of human affairs, which are neither wise nor theoretical.

Captain Stedman's Voyage may be recommended as one of the most amusing and instructive. The Dutch colony is divided into four provinces, Surinam, which is the chief settlement, Berbitché or Berbiz, Demarara, and Essequibo or Esquivo. The red mangrove tree is very remarkable, as it sends forth from its branches and trunk an infinite number of filaments, like the ropes of a ship, which fall into the ground, take root, and rise again. Towards Patamaca, on the W. of the river Maroni, the mountains reach within twenty miles of the ocean, a branch of the main chain, which proceeds E. and W. and causes the rapids in the river Surinam, about eighty miles from its mouth.† The tigers are so large, that the mark of the foot sometimes equals the size of a tin

city is totally unknown to La Cruz. Near the lake of Parima are the high mountains of Mei. The rocks in this part of South America often wear the aspect of towers and towns; and some such rocks of talc or micaceous schistus occasioned this romance, at which the fate of Raleigh's expedition, and of that learned commander, forbids us to smile.

* Bancroft, 260.

† From Dr. Pinckard's account, it would appear, that the falls and rapids in the rivers are generally over whin stone, the green stone of the Germans, a species of basalt. He supposes the climate equal to that of the West India islands. There are two wet, and two dry seasons. The long wet season is from April to September; the short, from the middle of November till January. From the middle of January to the end of April, the air is dry and clear, and comparatively cool.

plate, and the length from the nose to the root of the tail six feet. The cruelties of the Dutch settlers, and especially the women, towards their slaves, surpass all description; and Stedman has given multiplied instances which shew that the phlegmatic character is capable of more atrocity than any other. The palm which Stedman describes as bulging in the trunk, seems to be the *drunken tree* of Paraguay. The vine, cherry, peach, apple, pear, cannot endure the heat of the tropics, and are all fruits of a temperate climate. He says, that in the province of Surinam, are from six to eight hundred plantations of sugar, coffee, cacao,* and cotton, which produce annually to the value of more than a million sterling: he computes the number of slaves at seventy-five thousand, the annual supply being two thousand five hundred.

* Dr. Pinckard observes, ii. 340, that what is called cacao, or absurdly cocoa, in England, is only the shell of the seed or bean; the kernel, or true cacao, being used for making chocolate. Good cacao can therefore only be had by boiling chocolate thin and weak.

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FRENCH POSSESSIONS.

THE French settlements in Guiana were first formed about the year 1635. The southern boundary, by the peace of 1801, is the river Arawary, and a direct line from its source to the Rio Blanco. The limit betwixt them and the Portuguese is more clear and precise than that on the N. where an arbitrary and undetermined line, at the distance of about a degree and a half, or one hundred g. miles from the former, divides them from the Spanish and Dutch possessions, as far as the river Maroni on the E. The limit passing the Maroni at 3° 15' N. lat. thence ascends N. in a line with the river Mana, at the mouth of which there was, or is, a French post about ten miles from the mouth of the river Maroni, which is in the Dutch possessions.* From the Mana to the Arawary, the French shore is of considerable extent, being about six degrees, or three hundred and sixty g. miles. But so little skill have the French in the plantation or management of colonies, that the only town is that of Cayenne, situated on a small isle, or rather delta, called Cayano. Hence the whole territory is commonly styled Cayenne.†

The coast is dangerous, being full of sand and muddy shoals, deposited by the large rivers, and which, by secular gradations, add to the extent of the continent. These shoals sometimes reach to the distance of two leagues from the shore.

* By other accounts, the Maroni is the boundary, with a Dutch post on one side, and a French on the other.

† General Ramel, who has published an affecting narrative of his transportation to Cayenne, by the tyrannic order of the Directory (Leipzig, 1799, 8vo.) was imprisoned in a miserable fort, called Sinamari, on the river of the same name. There is also another fort, called St. Louis, on the river Oyapoc. The Sinamari is thirty leagues to the W. of Cayenne, not to the E. as Ramel says, p. 131. It is truly singular that such errors should be common in books of travels.

The

The town and fort of Cayenne stand on the northern point of an isle, bounded on the W. by the river of the same name, on the E. by that of Mahury, on the S. by an arm which joins both rivers, and on the N. by the sea.* This isle is about four or five leagues in length. The town is an irregular hexagon, surrounded by walls, with high bastions, and a ditch. There are about two hundred houses of wood, and whitened clay. The garrison is from two to three hundred men. There is also a tolerable harbour, the only one, according to our author, on this coast capable of receiving large vessels, between three islets, about three leagues from the mouth of the river Kourou. The coast is mostly covered with mangrove trees. The savannas are commonly marshes in winter. The heat of the climate is greatly relieved by the trade winds, which blow full upon the coast. Our author says, that the dry season of Guiana is the rainy season of the West Indies, though at no great distance. The climate has become less insalubrious since the woods of the isle have been cleared; but, in 1763, about twelve thousand persons perished on the banks of the Kourou, being a colony rashly planted by the French ministry, without due preparation, and even in the rainy season! A curious specimen of French colonization.†

Our author, who from his situation must have derived much practical knowledge, computes the white inhabitants of the whole colony at nine hundred; many of them living in great poverty, or deriving their existence from the consumption of the garrison; while about seventy planters might live upon their revenues. The mulattoes, or people of colour, might be four or five hundred; and the negroes nine thousand. The fugitive slaves have sometimes been reclaimed by the missionary priests, upon promises of complete amnesty; a method more amiable than that of the Dutch, who hunt them like wild beasts. In general the negroes were treated with such humanity, that the edict for their emancipation was not followed by the shocking consequences which happened in St. Domingo. Besides the Galibis, there are many other Indian tribes, mostly of middle stature, but the women less, and not so well formed

* Description of Cayenne by Lescallier, formerly chief commissary there, at the end of the French translation of Stedman's Voyage, vol. iii. Paris, 1799.

† Ib. 386.

as the men. Their features differ little from those of Europeans; and the progeny of the two races can scarcely be distinguished from that of the ancient continent. The Indians generally stain their skin of a red colour with roucou, or arnatta, a defence against the musquitoes. They reckon time by the revolution of the moon and of the Pleiades. Some of them play exquisitely on a flute, so as to produce a horrid sound somewhat resembling the bellowing of an ox. Girls often choose their husbands by presenting drink, the whole ceremony consisting in the acceptance. In other respects their manners differ little from those of the western tribes, which shall presently be described.

Botany.

There are more materials for the botany of Guiana collected by the French, Dutch, and English settlers, than for any other part of South America; * and in consequence of the swampy soil and moist atmosphere of this region, it presents a vigour and wild exuberance of vegetation, perhaps without parallel. All the usual tropical productions, except those that delight in dry and sandy tracts, are found here in full perfection; the names and qualities of these however we shall not again repeat, but proceed to the notice of those which are more properly characteristic.

Besides the common species of palms, there are two which are reckoned almost peculiar to this part of America, but which, together with many other of the native plants of Guiana, have not yet found their way into the Linnæan system. One of these, called the cekarito palm, is remarkable for its hard splintery wood, of which the small poison arrows are constructed. The other, the manicole palm, grows only in the deepest and most fertile soil, where it attains the height of fifty feet, while its stem in the thickest part is scarcely nine inches in diameter. The annotta (*bixa orellana*) seems to be here in its favourite climate, as appears from its magnitude of growth and brilliancy of colour. The quassia, whose intense bitterness is become of late but too familiar to English palates, and the quassia simarouba, a medicinal drug of great efficacy, as also natives of Guiana; nor among the ma-

* Bancroft. Prefontaine, Plantes, herbes, arbrisseaux et arbres qui naissent a Cayenne, Aublet Hist. des plantes de Guiane.

terials which the healing art derives from this country ought we to omit BOTANY. J
the mention of the ricinus or castor oil nut, the cassia fistula, the palm
oil, the cowhage (*dolichos pruriens*), the balsam of capivi, and ipeca-
cuanha. An herbaceous plant called troolies grows here, whose leaves
are the largest of any yet described; they lie on the ground, and have
been known to attain the almost incredible length of thirty feet, by three
feet in width: so admirable a material for covering has not been be-
stowed on this country in vain; most of the houses are thatched with
it, and it will last some years without requiring repair. The singularly
elastic gum called caoutchouc is produced from a large tree inhabiting
French Guiana, and here it is used for vessels of various kinds and for
torches. A small tree called caruna yields a farinaceous nut, from which
the slow poison of the Accawau Indians is prepared, the certain though
protracted instrument of jealousy or revenge. Still more certain, be-
cause more rapid, is the Ticuna poison, the dreadful equal of that from
Macassar: it is prepared from the roots of certain climbers called
nibbees, which inhabit the entangled forests of these immeasurable
swamps, and are a worthy shelter to the panthers, the serpents, and all
those monstrous and abominable reptiles that generate and batten in this
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NATIVE TRIBES, AND UNCONQUERED COUNTRIES.

*Arrangement.—Moscos.—Muzos.—Savages on the Orinoco.—Aruacs.—Tribes of
Brazil.—Abipons.—Southern Tribes.—Patagons.—RECENT DISCOVERIES,
1790—1800.*

ARRANGE-
MENT.

IN giving some account of the native tribes and unconquered countries of this vast portion of the globe, it is difficult to form a selection. Some writers have affected to aggregate into one body the most striking features of the manners of the different tribes, a plan wholly unsatisfactory, and which can only lead to confused and erroneous notions. It has been deemed preferable to choose certain tribes in various quarters, and leave the general result to the reader's reflection.

The Peruvians and the Araucans, the two most distinguished nations, have already been described. In giving some idea of the other tribes of South America the arrangement may be regarded as arbitrary; but as the conquest and discovery commenced in the north, it may not be improper to begin with that division, and thence proceed to the southern extremity. As however the recent discoveries on the great river Marañon, 1790—1800, are of infinite importance to the geography of the unconquered countries, and require more deliberate enquiry, they shall be reserved for the last consideration.

It is well known that the two nations on the new continent, who approached the nearest to civilization, were the Peruvians and the Mexicans. But there are two other nations that deserve particular attention;

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as, though they had not made so great a progress, they were still distinguished by an advancement beyond that of all the other savage tribes except the Araucans. These were the Natches of North America, and the Moscos in the kingdom of New Granada. The manners of the former have been minutely described by M. Dupratz; while our intelligence concerning the Moscos is rather imperfect.*

ARRANGEMENT.

The *Moscos* are by some said to have been so called by the Spaniards, who finding them more numerous than the other tribes, transferred the appellation from the *Mies* which also abound in the country. The conquerors found them governed by two elective princes, one of whom, called the *Zipa* resided at Bogota; while the *Zaqui* was established at Tunja. The electors, who seem to have been hereditary, had also their fixed residences, presenting as it were a type in miniature of the German empire. Others more justly infer that the appellation of Moscos was a mere play of words upon the native name Muiscas. However this be, they were the most civilized people after the Peruvians. They wore a close tunic of cotton, with a square cloak of the same fabric. On the head was a cap of the skins of animals, decorated with plumes of various colours; while over the forehead hung a crescent of the gold or silver which abounded in their country, the points turned upwards.† Their arms were adorned with bracelets, formed of stone or bone; the nose-ring, a common ornament in Hindostan, was of gold; and on gala days the face and body were painted with *achiote* or *rucu*, which yields a vermilion tint, and with the juice of the *jagua*, which produces a deep black. The women used a square cloak, called *chircate*, fastened with a girdle; and over the shoulders a small mantle called *liquira*, fixed on the breast with a large pin of gold. The men wore their hair long, and divided in what is called the Nazarene form; while that of the women was loose and darkened by art; the greatest affront being to cut off their hair. Both sexes were handsome, and of good dispositions. The weapons were slings, swords of hard wood, and light darts. They

Moscos or Muiscas.

* It is truly surprising that the *Histoire de la Louisiane*, by Dupratz, Paris, 1798, three vols. 12mo. one of the most intelligent and instructive works in American bibliography, should have totally escaped Dr. Robertson in his excellent History of America.

† Ekalls, xxiii. 54.

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believed in a great author of nature; and adored the sun *subi*, and the moon *chia*, as his representatives. Their immortality was material, as usual among savages; and they buried the dead with ornaments of gold, and the precious emeralds of their country. They were in constant warfare with the Muzos and Colinas, but were feared and respected by all. The Mosco language, called Chibeha, was general throughout the kingdom; but is now adulterated and nearly lost, though most of the converted tribes of the kingdom of New Granada belong to this nation, and are generally of generous dispositions, bold, faithful, and robust, though inclined to ebriety.

The best account of this singular people is that given by Piedraheta, bishop of Santa Marta, in his history of the conquest of New Granada, whence Dr. Robertson has selected the following circumstances. *

"In Bogota, which is now a province of the new kingdom of Granada, there was settled a nation, more considerable in number and more improved in the various arts of life, than any in America, except the Mexicans and Peruvians. The people of Bogota subsisted chiefly by agriculture. The idea of property was introduced among them, and its rights secured by laws, handed down by tradition, and observed with great care. They lived in towns which may be termed large, when compared with those in other parts of America. They were clothed in a decent manner, and their houses may be termed commodious, when compared with those of the small tribes around them. The effects of this uncommon civilization were conspicuous. Government had assumed a regular form. A jurisdiction was established, which took cognizance of different crimes, and punished them with rigour. A distinction of ranks was known; their chief, to whom the Spaniards gave the title of monarch, and who merited that name on account of his splendour as well as power, reigned with absolute authority. He was attended by officers of various conditions; he never appeared in public without a numerous retinue; he was carried in a sort of palanquin with much pomp, and harbingers went before him to sweep the road and strew it with flowers. This uncommon pomp was supported by presents or taxes received from his subjects, to whom their prince

* History of America, vol. ii. 141. 200. 1803, 8vo.

was such an object of veneration, that none of them presumed to look him directly in the face, or ever approached him but with an averted countenance. There were other tribes on the same continent, among which, though far less advanced than the people of Bogota in their progress towards refinement, the freedom and independence, natural to man in his savage state, was much abridged, and their caziques had assumed extensive authority.

"Among the people of Bogota, the Sun and Moon were the chief objects of veneration. Their system of religion was more regular and complete, though less pure, than that of the Natchez. They had temples, altars, priests, sacrifices, and that long train of ceremonies which superstition introduced wherever she has fully established her dominion over the minds of men. But the rites of their worship were cruel and bloody. They offered human victims to their deities and many of their practices nearly resembled the barbarous institutions of the Mexicans."

The Muzos were neighbours and enemies of the Moscos; but are now only remarkable as having imparted their name to a province celebrated for rich mines of emeralds, the most precious in the world. Their country is mountainous, hot, and moist; and from the summits may be discerned the polar stars, both of the north and south; while towards the end of August, and the middle of March, the sun throws no shade at noon day. This savage tribe has many singularities.* They say that in ancient times there was, on the other side of the great river Magdalena, a kind of shadow of a man called Ari, who always lay reclined; and having amused himself with making in wood faces of many men and women, he threw them into the river, and they came out alive, when he married them, and taught them to cultivate the earth; after which, dispersing in different directions, they became the parents of all the Indians; who are inferior to the Europeans, because their heads were made of wood. They had no deities; nor did they adore the sun and moon; those splendid bodies having been created, according to their creed, after the wooden men, and merely to give them light. When girls arrived at the age of sixteen, they were married by their parents, without any previous notice. The husband then went to

MOSCOS OR
MUSCAB.

MUZOS.

* Estalla, xxiii. 56.

Muxos.

carefs his wife, when she received him with blows of a cudgel; but in a short time became appeased, and prepared his victuals, though during the honey moon they were obliged to sleep together without consummating the marriage. In case of adultery, the husband broke all the vessels of wood or clay that were in the house, and retired to the mountains, till the wife should have replaced them. The dead were dried before a slow fire, and not interred till the end of a year, the widow being obliged to cultivate the ground for her sustenance, till her relations took her home after the interment.

Guagiros.

The Guagiros are now the most troublesome tribe in the viceroyalty of New Granada. They occupy the fertile lands of Santa Marta, the district called Rio del Hacha, and Maracaibo, usurping the possessions of the Spaniards, and seizing their herds and moveables, so as to reduce many to poverty.* They also impede the commercial intercourse, being masters of the roads and paths. They on one side of the Magdalena, and the Chimitas on the other, even interrupt the trade of Carthagena and the coast. No where in the Spanish possessions are the Indians so unsubdued as in New Granada, which is a chief obstacle to the improvement of that viceroyalty; the Guagiros, and other tribes on the river Hacha, being supposed to amount to thirty thousand souls. The want of roads is another cause of the slow improvement in those parts of the Spanish territory.† The Guagiros are not only numerous and bold, but manage fire arms with considerable dexterity. They weave delicate webs of cotton; and fish for pearls in the river Hacha. They are mostly mounted on swift horses, and have considerable intercourse with the English and Dutch, who provide them with goods, slaves, and fire arms. They differ from the other Indians, as being a laborious and commercial tribe, and in consequence rich, as appears from their dress, which consists of a vest, a close cloak, and pantaloons. They constantly chew the plant *bayo*, the coca of Peru, which invigorates them, and carry it in a bag at the saddle bow. Though they march on horseback, they alight before a battle, and cruelly hamstringing their horses that none of their troop may flee.

* Estalla, xxii. 197.

† Ibid. xxiii. 98.

Gumilla published, in 1745, an interesting account of the savages on the Orinoco,* but mingled with much credulity, and many ridiculous receipts of antiquated medicine, which have been ludicrously repeated by Estalla in 1798, so low is the state of medicine in Spain. Gumilla is an advocate for the preponderance of the then new viceroyalty of Granada; and assures us that the little diamonds and jacinths found in the mines of Antioquia, the emeralds of Muzo, and the fine *pantauras* of all colours, are peculiar products; not to mention that the mines of Simiti, Caracola, Antioquia, do not envy those of Guanajuato, Zacatecas, Toluca, Sombrerete, San Luis, and Monte, in New Spain. During the great floods, the river Orinoco, where it passes a range of mountains, at the place called Angostura or the Strait, rises not less than forty varas or Spanish yards.† The nation of the Caberres, by his account exceeds the Caribs in courage and power. They were then situated on the river Guaviari, and were famous for the use of a mortal poison. The Otomacs, in the same quarter, raise their dead after the expiration of a twelve month, and transport the bones to a general tomb. Their women asserted that to cover their nakedness inspired them with shame, as it led to ideas of turpitude unknown before. The Otomacs are accustomed to eat earth, a practice recently observed by Humboldt.‡ But in fact they only preserve their grain, fish, turtle, &c. in earth; and eat the whole mingled, so that a stranger would imagine that they devoured earth. This is done with a view to preserve their victuals fresh; and the pieces afterwards dug from the pits resemble bricks.

In the country of the Salivas, there is a hill called Pararuma, which resembles a natural pyramid, surmounted by a beautiful plain.§ Another of the same kind, (not unknown in Congo and Hindostan,) is more than six miles in circuit, with a spacious plain on the summit, the height

* Madrid, 2 vols. quarto. He often quotes Horace by the odd appellation of *El Profano*, the Profane; and seems angry that Horace was not a christian.

From the recent information of Estalla, xxii. 287, it appears that the missions of Los Llanos, Apori, Meta, and Casanari, with those of the higher and lower Orinoco, passed, after the extinction of the jesuits under the direction of the government of Caracas, who pays their salaries and the garrisons of Guiana. The new missionaries were secular clergy, and preaching friars of the order of St. Francis or Capuchins; who from the austerity of their dress and exterior manners, seem peculiarly adapted to savage conversation, if not conversion.

† Gum. i. 59.

‡ Ibid. i. 187—193.

§ Ibid. i. 281.

SAVAGES ON
THE
ORINOCO.

being about an hundred and twenty six fathoms. One of the most precious plants is the *cabima*, or oil wood. The *manati* or sea cow, is caught by the savages in a very ingenious manner; and the number of turtles and their eggs exceeds all credibility. Gumilla appears to have been among the first who observed the cinnamon among the trees of America. There are some savages sensible enough to say, that they do not wear amulets as a defence against wounds, but merely to persuade their enemies that they are invulnerable. As in Peru the chief language is the Quechua, or speech of the Incas, and in Paraguay the Guaranic, so in the new kingdom of Granada is the Muisca or Mosca. On the Orinoco most of the dialects are derived from the Betoya or Jirara, and the Cariba. Most of the tribes are small, from five hundred to two thousand warriors; but the Caribs boasted of twelve thousand, and the Caberres were yet more numerous. The fury of the Caribs is not more destructive than domestic poison. Many mothers destroy their female children, to deliver them from the miseries suffered by women in a savage state; and they even regard this practice as an office of tender affection. Another practice is to destroy the new born babe, by cutting the naval string so short as to occasion a hemorrhage. A mother who was reproached by Gumilla, for having thus destroyed her little daughter, made the following pathetic reply, which he assures us is literally translated from the Betoya language.

Speech of
an Indian
woman.

“ Father, I shall tell you what is at the bottom of my heart. Would to God, father, would to God that my mother, when she bore me, had had sufficient love and compassion for me, to spare me the toil and the pangs which I have suffered to this day, and which I shall suffer to the end of my miserable life! If my mother had buried me when I was born, I should have been dead, but I should not have felt death; and should have been saved from lasting pains, equal to those of death; pains which I cannot escape, more than the daily toil which wrings my soul. Ah, who can tell what scenes of anguish yet await me, before I shall enjoy the happiness of death! Represent to yourself, father, the cruel toils to which a woman is subject among us. The men go to see us work, and only carry their bows and arrows, while we are loaded with heavy baskets, often one child at our bosoms, and another behind. Our husbands

SPEECH OF
AN INDIAN
WOMAN.

husbands kill a bird, or catch a fish, while we dig the earth, and support all the labours of the harvest, amidst the heat of a burning sun. They return in the evening without any burthen; and we, besides our children, bring roots to eat, and maiz for their drink. Our husbands on their arrival chat with their friends, while we are obliged to increase our daily toil, in searching wood and water, and preparing their supper. When they have eaten they go to sleep, while we pass almost all the night in pounding maiz to make their chica. And what benefits do we derive from thus watching to procure them pleasure? They drink their chica; they become drunk; and, losing their senses, beat us with clubs, they drag us by the hair, they trample us under foot! Oh father, would to God that my mother had buried me the moment I was born! You know yourself, father, that we have bitter reasons of complaint, because you see every day what I have told, but you do not know our greatest pain. How dreadful it is to us, father, when we have served our husbands like the meanest slaves, crushed with labour in the field, deprived of sleep at home, to see them take, at the end of twenty years, a young woman without experience! He attaches himself to her, and although she beat our children, and treat us harshly, we dare not complain, because we are no longer beloved, we are despised by our husbands. The young wife commands us, and treats us like her servants, and if we complain we are beaten. How suffer all these cruelties! Can an Indian woman ever do a kinder action to her daughter, than to exempt her from these pains, and prevent her servitude, a thousand times worse than death itself? Would to God, father, I must and will repeat, would to God that my mother had shewn her love in burying me when I was born! My heart would not have so much to suffer, nor my eyes to weep."

A flood of tears, deep sobs, and lamentations, here interrupted her discourse, which the more affected our author, as he well knew the truth of the tragical tale.

If we except the Otomacs, the Caberres, and the Caribs, the other tribes mostly flee when one or two fall in battle. All are deceitful and given

given to falsehood.* In general the savages bathe twice a day, a practice conducive to health and pleasure. The mosquitoes are very numerous and troublesome, the *macaurel* is a terrible snake; and the *buio*, a vast serpent, intoxicates with its pestiferous breath, and afterwards swallows the men or animals who are stupified.† The tale is not improbable, as there may be some particular gas, like that which Humboldt discovered in the cayman. The maize is sown, and gathered in two months: and the savages argue with great apathy, that women are ordained to labour, sow, and plant, because they are accustomed to produce, which man cannot. In the warm lands the produce is much injured by ants. The Pleiades are as well known and observed, as in Africa, perhaps another proof of African origin. The *fara* or *raval* seems to be a kangaroo. The *mapurita* is a beautiful little animal, jaspered with black and white; and defends itself by darting a wind of such pestiferous stench, that the jaguar or tiger will shrink and flee with the greatest trepidation. The Guaranos, in the delta of the Orinoco, live in huts built on piles of wood, like the people of Borneo. The *vergonzosa*, bashful or sensitive plant, is not uncommon on the banks of the Orinoco, as well as in New Spain.

The Caribs established in Guiana,‡ and who sent formidable colonies into what are called the Caribbee Islands, have already been described in the account of the West Indies. The Aruacs, or Aruacas, of

* Ulloa, in his American Notices, Madrid 1772, or 1801, has a singular remark on the savage manners. "An invincible inclination to lye and to deceive, is common to the Indians and to the Jews. In fact no dependance can be placed on what the Indians say, falsehood being inherent in their very nature. They with equal ease affirm or deny any thing; and their deceit is so natural and uniform, that it is scarcely possible to guard against it. They are also very fertile in tricks and artifice, when they are surprised in malversation; they will defend themselves by the most insidious flatteries, and with the most imposing vehemence of gesticulation. All this is common to the Jews; and it would seem that these are, in both nations, not only hereditary vices, but even interwoven with their very existence." Ch. xxi. Was not Ulloa afraid of the inquisition? But even in London, hundreds of Jews have been known to affirm, that they had seen a warrior on horseback passing through the air, while the other inhabitants perceived nothing but a violent storm of thunder and lightning.

† Gum, ii. 172.

‡ That large portion of South America called Guiana between the Orinoco on the N. and the Marañon on the S. must still be regarded as unconquered, and in fact little known. It abounds with beautiful and precious woods; and a new and rich dye from the *paraguanan*, was examined by Spanish chemists at Madrid in 1790, and pronounced to be superior to those of Brazil and Campechy wood, and to approach the cochineal.

the same country, are supposed to have been the progenitors of the *ARUACS*, peaceful inhabitants of the larger West Indian islands, Hayti or Hispaniola, Cuba, and Jamaica. In their original country they are seated on both sides the *Esquibo*, and extend to the Atlantic on the W. of the Dutch possessions. But it is singular that the Spanish writers in general regard the *Aruacas* as a branch of the *Caribs*, in which case it would seem incongruous to trace the benevolent indigenes of the West Indies from such a sanguinary source.* Of the language of the *Aruacs* short vocabularies have been published, which might be compared with the relics of the language of their supposed colonies.†

The *Aruacas* or *Aruacs* are a most interesting tribe, not only as they are regarded as the ancestors of the peaceable and amiable West Indians, whom *Colon* found in Hispaniola, Cuba and Jamaica, where their bitterest enemies were the ferocious *Caribs* of the Windward islands; but as being in themselves the *Otaheitans* of the new continent. *Stedman*, in his voyage to Surinam, has given an interesting description of the *Aruacs*. He regards them as a happy and innocent race, placed without care or poverty in a delicious country; and they even die with cheerfulness, in a certainty of passing to a yet more happy land. These Indians delight in personal cleanliness, and both sexes swim with great ease and agility. Our author saw a party of *Aruacs* enjoying this favourite recreation, and represents them as wholly different from the other tribes which he had seen. One girl was of extraordinary beauty, fairer than the usual copper colour. As she came from the river her only dress was a little square apron, composed of small beads, while her hair was fastened up with a broad silver bodkin. Her charming features, her nymph like form, her health, and playful liveliness, surpassed description; while her physiognomy announced that amiable simplicity, that inborn innocence, which cannot even suspect an offence to modesty.‡ Taking her bow she killed a parrot with a round headed arrow: and the *Aruacs* are such able shooters that they will kill a macaw or a pidgeon on their flight.

* This is a manifest error of *Alcedo* and others. † *Hist. Gen. des Voy.* xvi. 51.

‡ See the print in *Stedman's* work.

ARUACS.

Cultivating peace with most of the Indian tribes, the Aruacs are attached, as it were by sympathy, to the Europeans; and are equally remarkable for probity and gratitude. But when provoked to war, they assume the bow and a heavy club. Their prisoners are treated with humanity, while the Caribs continue to devour their captives; and during an insurrection in a Dutch colony feasted on the carcases of the negroes, which they called black game. Although the Aruacs be now considerably removed from the ocean, they descend the rivers in large canoes, sometimes forty feet in length.* They are not a little versed in the virtues of herbs, and cure their few maladies with simple remedies. A more ample account of the manners, and a vocabulary of the language of the Aruacs would be interesting, that they might be compared with those of the indigenal West Indians.

Bancroft informs us that the Aruacs are distinguished above the other tribes by elegance of form and mildness of disposition. They believe in a supreme deity, and in inferior malign spirits called Yawahoos. The priests or magicians are styled Peiis, the distinction being hereditary.

In a recent work of Dr. Pinckard there are some observations which deserve attention.

“The Indians who inhabit this part of the South American coast are of four tribes or nations, the Arrouwacs, the Accawars, the Warroas, and the Charibbees. The Charibbees, or Charibs, as they are more frequently called, are the tallest men, and of the most warlike aspect. Those we have seen of the other tribes are rather short, but in general well formed; although their figure denotes more of substance than of gracefulness. They are of a bright bay colour, their hair jet black, long, and straight. In common they are rather personable, and their features are more indicative of mildness than ferocity; for, although in some of them the lines of the Tartar face may be traced,† the cha-

* A great part of the Aruac nation, unvisited by Stedman, is still on the sea between Cape Nassau, and the mouth of the Orinoco.

† This resemblance is imaginary, and probably Dr. Pinckard never saw a Tartar. The Huns or Tartars were always to the W. of the Monguls and Manchurs who have oblique eyes.

rather more generally denoted by the countenance is that of gentleness and tranquillity. The eyes are very black, they are small, distant from each other, and deep in the orbits. The cheek-bones stand a little wide, but they are not strongly prominent, the forehead tends to squareness of form, and the eye-brows are heavy. The nose, though not strongly aquiline, when viewed in profile somewhat approaches that shape; the mouth is of middle size; the lips of moderate thickness; the teeth rather small, white and regular; the chin round; the angles of the lower jaw somewhat wide: from all which you will perceive that the face is rather broad than round, although the contour approaches more to the circular than the long or oval. We did not observe among them any resemblance of the flat nose, the wide mouth, thick lips, or large teeth of the negroes.

" Their necks are thick, and in general not sufficiently long to be graceful. The chest is high and full; the shoulders square, going off at nearly right angles from the neck. The limbs are fleshy and robust. Upon the whole, they may be said to be of the figure generally denominated square-made, and consequently their form denotes more of strength, than of gracefulness or agility. Still there is a difference between their figure and that of the strong-marked muscular subjects of colder and more mountainous regions. Among the Indians of Guiana, the rough lines denoting strength are concealed in consequence of the interstices between the muscles being so filled with fat as to give a general smoothness to the surface; and from the same cause, the fine action of the different muscles becomes less obvious, when they are in motion, or under any exertion. Hence, although the figure of an Indian be square, full, and robust, still it does not convey precisely that idea of strength which attaches to the rough and muscular frames of the north; and yet is their form even more unlike that of the negroes.

" It has happened to me to have frequent opportunities of seeing parties of Indians, and Africans standing naked together, and I have always remarked a striking difference in their figure. The negroes have longer necks, and a finer fall of the shoulder. Their chest is not so full and open. Their limbs are not so stout, but thinner, and longer.

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OF GUIANA. in proportion to the body.—The form of the Indians appears close and compact, while that of the negroes is more loose and slender, and more indicative of the heat and languor of climate. The projecting curvature of the tibia, so common to the Africans, does not prevail among the Indians. The difference of countenance is still more remarkable than the difference of form; but, as the negro face is familiar to you, I need not enter into a more minute detail of the discordant features.

“The Indians wear no clothing, except a band tied round the waist and brought between the legs to fasten before; such as I have mentioned to be in use among the negroes of these colonies. This is worn both by the men and women. Some, who have visited the colonists, have it made of blue cloth; but those who have not had the same opportunity of procuring cloth, make it of the bark of a tree. Sometimes, instead of this band, the women use a small apron about three or four inches square, which being tied round the waist, and left to hang loose before, serves by way of a fig-leaf. These aprons they call *kways*. Among those who have associated with the colonists, the kway is sometimes made of small beads of different colours, ingeniously put on threads of cotton, or of the silk-grass, so as to give the apron the appearance of being woven in a variety of figures. This is used as high dress, and is much valued. It happened that I, one day, met a young buckeen, thus ornamented, walking with her mother, and being desirous to add a sample of the kway to my collection of specimens, I made signs to the parent, meaning to ask if she could procure me one, when, without the slightest hesitation, she took off that which was before my eyes, and presented it to me; the young lady very modestly, but without blushes, supplying its place with the pocket handkerchief which I gave her in exchange.*”

“From the inactivity of the Indians they are generally seen to be *enbonpoint*, and this, as I remarked before, gives them a certain smoothness of form, and of surface; but their skins have not that velvet softness so common to the negroes. Their bodies are peculiarly free from hair. Possessing an idea, that it is more becoming not to have any hairs, except upon the head, they are in the habit of pulling them from

* Dr. Pinckard's Notes on the West Indies, vol. ii. p. 440. 1806.

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the chin, the breast, the armpits, and other parts. The general smoothness, thus given to the surface, has led some travellers, who have been ignorant of the cause, into the error of considering this to be their natural appearance; and hence have arisen the strange opinions that they differed from Europeans, and were in this respect a peculiar race of the human species. The instrument used for pulling out the hairs is a small piece of wood partially split. Those who intermix with the colonists often employ a bit of wire, twisted into a spiral form, like that which is used for making the elastic hat bands.

"From the heat of the climate, and the facility of procuring food, the Indians of Guiana are naturally indolent. In every quarter of the globe the great incentive to industry is either necessity, interest or ambition. Labour simply as such, is no where a natural impulse. It is the effect of our real, or imaginary wants. Among the natives of these woods, it springs from necessity alone, and ceases with the immediate occasion which calls it forth. They have no interest in the accumulation of property; and therefore are not led to labour in order to obtain wealth. They live under the most perfect equality, and hence are not impelled to industry by that spirit of emulation, which, in society, leads to great and unwearied exertion. Content with their simple means, they evince no desire to emulate the habits, or the occupations of the colonists: but, on the contrary, seem to regard their toils and customs with a sense of pity or contempt. I have, occasionally, seen parties of them looking on, when our soldiers have been assembled, and going through the various evolutions of their exercise: and they universally regarded them with a quiet indifference, or the only sentiment indicated by their features was a kind of contemptuous pity, which was sometimes expressed by a significant look, that seemed to say—"Aye, foolish people! you take vast pains with these things;—but we do them much better, with infinitely less trouble."

"They are very fond of drinking rum, and eagerly swallow it to intoxication. But they observe a kind of method in their drunkenness; for when they come down to the towns in bodies of considerable numbers, it is observed that half of the party will freely devote to Bacchus, while the other half carefully refrain, in order to watch the helpless;

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and these, when restored by all-healing Morpheus, are observed to take *their turn* of watching, and to guard their late protectors through a similar visit to the deities of turbulence and repose. They have no pleasure in long sipping, but swallow large draughts of rum, or drink it quickly, glass after glass, till they are unable to move.

"The Indians are very arbitrary and despotic towards their women. Polygamy is practised among them. Each man takes as many wives as he can conveniently maintain. They are very jealous, and commonly appoint the senior of their wives as a spy or guardian over the conduct of the others; but as a spice of intrigue has found its way even into the wild woods, means have been found to convert the old Duenna into the best channel of obtaining kind favours from the junior branches of the *barem*.

"All the domestic labour is done by the females, and in their journeyings, from place to place, the women are made to toil under the burden of whatever they may have to transport. Thus in removing from any place of abode to take up a new home, the different articles of furniture, and all the little variety of implements and utensils, are loaded upon the backs of the women, who follow in silent train, bending under a heavy load, while their imperious lord marches on before unincumbered.

"From the rigid government exercised over them by the men, the women appear to be sombre and reserved. They commonly sit with their backs towards strangers, and remain in profound silence when their husbands are present. In their absence they shew less restraint, and seem more disposed to cheerfulness and vivacity. Like the men they are very fond of rum, and drink it glass after glass, as though it were only water.

"I have observed that notwithstanding the great heat of climate, the Indians of South America are not of the same meagre appearance as the negroes. From their habits of indolence, a portion of fat is deposited under the skin, which gives them a soft fulness of form unlike the rough-lined spareness of the negroes, or the strong-lined vigour of the inhabitants of colder regions: but we do not see, among the people of the woods, a single instance of the heavy, protruding obesity so frequent among the luxurious sons of civilized society. Figures, it is true, may be found

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among them as lean, as hard-toiling slaves—but perhaps no Indian was ever seen palpitating under that oppressive protuberance of fat, which the *bons vivans* of Europe, and particularly the beef-eating subjects of England so frequently carry before them.

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“ This circumstance may tend to shew, that great obesity is only the effect of indolence, or good living, or of both acting together; and that by a due observance of exercise and abstemiousness it might, in all cases, be prevented. Perhaps no West Indian planter ever lost the labour of a slave from his being overloaded with fat: nor did Alexander and Hannibal, after a long and severe campaign, ever see their armies thinned in consequence of their soldiers being oppressed with obesity. Indeed the common labourers of Europe do not often find their toil interrupted by carrying about them a weighty mass of indulgence and luxury.

“ The same may be remarked in a great degree with respect to that distressing malady the gout. The Indian is not detained from the chase, the soldier from the march, nor the slave nor the peasant from his toil in the field, by the gnawings of this painful disorder. It is almost wholly confined to the rich and luxurious, and is at once the offspring and punishment of indolence and voluptuousness; nor would it long remain among the opprobria of medicine, were it possible to enforce the regimen prescribed by physicians:—although it must continue to prevail so long as forbearance, from habits of indulgence, shall be deemed a greater punishment than the painful tortures of disease.” *

“ At the fort we have also had a visit from an Indian family, who came to us in the true style of native accommodation, exhibiting the full equipage of the family canoe, and forming a scene of high interest and novelty. Before the canoe reached the fort, we observed the long black hair, and naked skins of the man, his two wives, and several children, who were all stowed about the vessel with the strictest attention to equipoise, *trimming* it most exactly. The canoe was large; and, in addition to the family, was loaded with cedar, and other kinds of wood for sale or barter. On the top of the cargo appeared a ferocious-look-

* Pinckard's Notes, vol. ii. p. 445.

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ing animal, setting up his bristles like the quills of the porcupine. It was a species of wild hog, caught in the forest, and hence called a *bush-bog*. A small monkey was likewise skipping about the canoe. At one side sat two very fine parrots, and on the other was perched a large and most beautiful mackaw, exhibiting all the rich splendour of his gay plumage. On the canoe arriving at the landing-place, the bow and arrows, the clay cooking-vessel, calabashes, hammocks, and crab-baskets, were all brought into view, and we gazed on the whole, as forming a very complete and striking specimen of original equipage and accommodation. The whole family—the household apparatus—the bow and arrows—the canoe and paddles—the hammocks—in short all the furniture and implements for cooking, for sleeping, for shooting, fishing, and travelling, were here moved together in one compact body, so as to render it indifferent to them, whether they should return to the home from whence they came, or take up a new abode in any other part of the forest." *

Tribes of
Brazil.

From Guiana we shall pass to the southern banks of the Marañon. The wide territory of Brazil is inhabited by many savage tribes, but the chief and most numerous is that of the Topayos. They are anthropophagi, and if a woman miscarry will greedily devour the foetus. Strangers to cultivation, they live upon fruits, and the animals they kill. The Topayan language is very widely diffused, and is divided into several dialects. The manners of the Topayos have been so amply illustrated by the old writers on Brazil, Lery, Laet, Margrave, and others, that it is unnecessary to resume such a trivial topic. Their nakedness, ferocity, vindictive spirit, war cries, and whole mode of existence, have been depicted by Lery in particular, with genuine, though antique colours.

According to Estalla the Topinambos and Marjats are also very considerable tribes in Brazil.† The Petivars in the N. E. are said to be benevolent and hospitable. The Molopagos, near the river Paraiba, are

* Finckard's Notes, vol. ii. p. 335.

† xxi. 314. Estalla has observed, that the greater part of the wealth of Brazil passes to the English.

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BRAZIL.

said to resemble the Germans in stature; and the women are very beautiful and modest, with long hair like the Europeans. They live in villages surrounded with wooden fences. Those inland, on the E. of the great river Llavari, or Madera, seem to be little known; but could be well described by the Spanish or Portuguese commissioners for settling the line of demarcation. An European, who was present from curiosity, in a battle between the Topinambos and Margaia on the river Topayfa, has thus described the engagement.* "Our friends, the Topinambos, were about four thousand, and the battle was begun with such fury that both parties appeared frantic. When the enemy was discovered, at the distance of less than half a mile, the war shout raised was horrible; as they approached nearer the cries augmented, while they raised their arms, used dreadful threats, and shewed the bones of the enemies which they had eaten, and the strings of their teeth around their necks. At due distance a shower of arrows fell; and those who were struck seized them with fury, broke them to pieces, bit them like wild beast, and became still more furious. They then joined in battle, and at every blow a man fell to the ground with his skull beat to pieces. I have been in many actions of European troops, but cannot compare them with this. The spectacle was magnificent as well as horrible, to see their leaps, assaults, and defence; while there flew an infinite number of arrows, winged with feathers of various colours; and the caps, shields, and ornaments of the Indians, adorned with feathers, red, blue, green, and other colours, reflected a thousand tints to the sun. After three hours of battle, there being many dead and wounded on both sides, our Topinambos obtained the victory, with thirty prisoners male and female. On their return, they were received in the villages with singing and dancing as usual; the prisoners joining, according to custom, and saying to the women, "here is the meat which you relish so much."

The prisoner is feasted for a considerable time, and has beautiful girls to attend him, till he begin to enjoy life and get fat. He is afterwards brought out, and a heap of stones laid at his feet, in order, as they say, to avenge his death. With these stones he often wounds

* *Estados*, xxi. 331. The passage is from Lery.

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many of his murderers; but when they are exhausted, his intended executioner, who had not been seen before, approaches richly decorated with feathers, and the wooden club or sword in his hand. He accuses the warrior with having eaten many of his countrymen; which he confesses with vanity, adding many threats, and that if he were free he would kill and devour them all. The other replies, "I shall prevent your design: you shall yourself be killed and devoured." He then discharges the fatal blow, which there is no occasion to repeat. The girl who has lived with him falls on the body, and weeps for a while; but this sentimental affection does not prevent her claiming her share of the carcass.* Other women then approach, wash the body with warm water, divide it with incredible quickness, and rub the faces of the children with the blood, in order to accustom them to such scenes: they then roast all the parts, except the bowels. A Brazilian warrior is distinguished by the heaps of skulls, which he proudly shews to a stranger as proofs of his valour. The bones of the thighs, legs, and arms are also preserved to make flutes, while the teeth are strung as necklaces. It is remarked, that even European refugees among these savages, have no aversion to human flesh.†

The Petivars bore their lips, and adorn them with a green stone, of which they are so vain as to despise all other nations, a lively image of national prejudice and vanity. When the wife has brought forth a child, the husband confines himself to his bed for a month, and receives visits of congratulation. Estalla observes, that this custom is not only common in many parts of America, but was also known to the ancient Spaniards, as mentioned by Strabo. The reason has been already explained to be, that if any accident were to befall the father, the new-born babe would suffer.

* If the woman prove with child, the poor babe is either devoured as soon as it is born, or when it has acquired some strength and plumpness. Estalla, xxi, 337.

† Such inhuman customs are not known, except among the African tribes, from whom I have before inferred the Americans to have descended, except the Peruvians, probably Asiatics. I must repeat, that there is not the smallest similarity between the American dialects and those of Asia. Nor is an unwilling or fortuitous passage from Africa to America unknown in modern times: In 1731 a bark of Teneriffe, laden with wine, in passing to another island, was driven out to sea; and with five or six half starved mariners, arrived at the island of Trinidad, at the mouth of the Orinoco. Gumilla, ii. 50.

Knivet, who was in the service of Portugal, relates an attack on a TRIBES OF BRAZIL. fortress of the Tomimis, near the river Paraiba. It was defended with a wall of large stones, and vigorously defended.*

The Mologagos have fixed hours for their meals, and are very neat and cleanly, having little of savages, except their affection for human flesh. In their country there are mines of gold, which however they do not work, being content with what is brought down by the river.†

The Brazilian tribes seem to have no religion, but they believe that the most distinguished souls become genii, who amuse themselves in planting trees, and with dancing perpetually in delicious vales. They are in general of the height of Europeans, but more robust, and less subject to sickness. Some are said to attain the age of one hundred. All hair, except on the head, is regarded as indecent, and eradicated with pincers; but the beards of the Indians are always slight and woolly, with the exception of a few tribes, so that the supposed indecency is a relative idea.‡ The commonest foods are the yuca or cassia, and the *axi*, nor is maiz wanting. The drink is chicha, as in other parts of South America, but they never drink with their meals.

Young women before marriage, may abandon themselves to strangers, to whom they are even offered by their fathers. On the arrival of a stranger, the women shed abundance of tears, pretended to proceed from joy, but they have as much command of their tears and smiles as in more civilized countries. The venereal disease, according to Estalla,|| is endemial in Brazil. It is cured by total abstinence, and the juice of a few plants. Some of the vessels of earthen ware, though rude on the outside, are decorated within with a white crust, upon which they paint various figures.

From Brazil the transition is easy to Paraguay. Many of the tribes range over a considerable extent of territory, and sometimes totally change their positions. Dobrizhoffer has observed, that as it is errone-

* Estalla, xxi. 322.

† Ib. xx. 325.

‡ Knivet informs us, that the Topinambos differ from all the other Indians in the practice of wearing their beards.

|| xxi. 343.

PARAGUAY. ous to suppose that they have no beards, so it is certain that the hair on that part of all the American indigenes rather resembles wool, and even that thinly scattered; so that if you meet with an Indian, or a tribe, more strongly supplied, it may be safely concluded, that the fathers or grandfathers were European.* He adds, that there is no semblance whatever of any European, African, or Asiatic language throughout all the native tribes: and the opinion of this learned author, who lived so long in America deserves great attention. After deserved praise of the celebrated English navigator Cook, and of Dr. Robertson, he denies the supposed similarity of American physiognomy. His account of the manners and customs of the Abipons, which fills his second volume, is perhaps the most complete description of savage manners which has yet appeared.

Abipons:

The Abipons were formerly called Callegas by the Spaniards, on account of their large foreheads, as they tear off the hair for a considerable space, so that they seem to be bald before. They possess such abundance of horses, that some chiefs have more than four hundred. Their women are sometimes as fair as European; and in riding often use a parasol, made of the feathers of the American ostrich. The Abipons, and neighbouring tribes, are in general fairer than the Tehuels or Patagons, and others nearer the southern pole†; some of whom having been seen by our author at Buenos Ayres, he says they are tall men, but by no means of a gigantic stature: yet Kangapol, a Patagon chief, appears to have attained nearly the height of seven feet. In variety and elegance of countenance, the Abipons rival the Europeans, except that the men are embrowned by the sun, and by the smoke of their hovels, but still they scarcely exceed the darkness of a Spaniard. The

* Dobrzhoffer, ii. 6.

† On this occasion, ii. 18, he gives his opinion that these southern tribes came from Africa, which indeed of the three ancient continents has the best claim to the origin of all the indigenes, being the only country where tribes are found of a copper colour. I have already mentioned the vessel driven by the mere force of the trade wind from Teneriffe to the isle of Trinidad. From this African origin may be excepted the ingenious and benevolent Peruvians and the Araucans, who appear to me to have been Asiatics. I must repeat my protestation against Dr. Barton's corruption of my text, on such occasions, thus leading the unwary reader to suppose that I advance opinions long since exploded, and unworthy of a man of science.

nose is frequently aquiline; and deformity scarcely known. Not only ABIPONS. the little wool on the chin, and other places, is eradicated with pincers, but such is the aversion to hair, which is regarded as an impurity, that they pull out that even of the eye-brows and eye-lashes. That permitted to remain on the back of the head is jet black, and very thick. Our author has given the portraits of six Abipons, male and female, of various ages; and, if not disfigured by artificial marks, they could not be discerned from Europeans. These marks are made with a thorn, and afterwards rubbed with ashes. The women to improve their beauty are tattooed, so that the skin resembles a Turkey carpet. All the marriageable girls undergo this torment, which is administered by old women; and if they shrink, are bitterly reproached for a cowardice unworthy of their race, and threatened with perpetual virginity. The more marks a woman bears, the more noble she is reputed. It was formerly the custom to slit the under lip, and insert some fantastic ornament, commonly of the gum of the *timbabi*, which assumes the beauty and hardness of amber. Human flesh was also a frequent food; and even the converts will confess that they long for it. But the neighbouring Mocobs and Tobas are more addicted to this practice. Alaikin, an Abipon cazic, having been slain in battle, was eaten by the Mocobs, and a boy of twelve years of age, was added by way of dessert; while an old woman, who happened to be killed, was left as her flesh was too tough. The ears are distended with large incisions, so that they would sometimes admit a billiard ball; an assertion for which his catholic majesty laughed at Gumilla, but which is nevertheless true: nor are earrings unknown to men, and our author vindicates this practice by the example of the Persians and Athenians.* He might have added the modern French; but this fashion has certainly a most unpleasing air of effeminacy. Always on horseback, or in exercise, the Abipons are generally slender, though they devour great quantities of beef and venison, and even the flesh of the jaguar, with that of the ostriches and their eggs. In their drunken festivals, they will often draw blood on the most tender parts of their body to shew their courage. The food and drink which

* Dob. ii. 39.

ABIPONS. they derive from the carrob, already described, are a complete antidote to consumptive disorders. Our author denies that the patience of the American tribes under pain proceeds from insensibility; and asserts that this faculty arises from the point of honour exerted in a confined and fanatic direction. The youth of both sexes are of eminent modesty and chastity; and the men rarely marrying before the age of thirty, nor the women under twenty, the pleasures are, as among the ancient Germans, reserved as a treasure for old age. The common dress is coarse woollen, but when the south wind begins to blow from the antarctic mountains a cloak is added, made of the beautiful skins of the otter. They have no meals, but eat when hunger calls, or occasion offers. The drink is a fermented decoction of the carrob, which is not only healthy, but an antidote for many diseases, particularly the stone and gravel.* When the weather is moderate, they bathe every day in a lake or river: and their souls never being broken on the wheel of care, they attain a lengthened and vigorous old age.

The Abipon language though sufficiently rich has no term for a supreme being; and the word *Dios* is obliged to be borrowed from the Spanish. Our honest missionary relates a conversation on this subject with a cacic, whom he excited to the idea of a Supreme Creator, from the sublime spectacle of the starry heavens; but the chief answered, "our ancestors and we have been so solicitous to find food upon the earth, that we never once thought of the stars, nor their architect." In the arts the Guaranis seem to exceed the Abipons, being, by the account of our author, tolerable musicians, painters, sculptors, smiths, weavers, and even scribes; while some make rude clocks, bells, and golden ornaments. The memory of the Guaranis is so strong that it was usual for a cacic to repeat to the people, gathered in the open air, the entire sermon preached by a missionary in one of the small churches; and our author adds, that seldom was there one sentence omitted.

The Abipons seem to believe in an evil principle or demon, whom they endeavour to flatter by calling him their uncle, as the ancient Gauls pretended a descent from Dis or Pluto.† He is served by a kind of

* See the botany of La Plata.

† The Tehuels style the chief demon *Elal* or *Balichu*, the inferior demons *Yuzubu*; the Brailians and Guaranis style the demon *Anaaga*. Ib. 100, 101.

priests or magicians, to whom the credulous people ascribe great powers. ABIPONS.
 The idea of ghosts is not unknown; and a Spaniard who was murdered was said to appear every night on horseback. Fiery meteors being very frequent in this part of America, both by day and night, they are believed to signify the death of a priest or magician. They observe the Pleiades with singular veneration, a practice also known among the African tribes, and it is likewise common among the Topayos of Brazil: but our author in vain endeavours to find any trace of it in Peru, where, besides the worship of the sun as a benignant representative, the almighty Pachacamac, the Creator of the Universe, was adored in the celebrated temple four leagues to the south of Lima.

Polygamy is not unknown, but the tribe of the Abipons does not exceed five thousand souls, the women destroying their children, (which they must otherwise suckle during three years,) in order to regain the company of their husbands. While the females are destroyed by the tribes on the Orinoco, here they are preserved for gain, as a wife is always sold. It is rare that above two or three children are brought up; and our author, an impartial German, ridicules the idea that the diminution of the savages is owing to Spanish cruelty. There is no supreme chief, but many cazics, who are ambitious to obtain the Spanish title of captain, with them a badge of nobility. An old woman to inspire respect, will say "know that I am a captain:" and a chief will glory to die with the captain's staff in his hand. During war, however, they acknowledge one leader, and act with some unanimity; but the cazics must indispensably be liberal, for an Abipon is always inclined to ask, and will take no refusal. If any one appear in a new tunic, he must give it to the first who demands it; and a refusal would subject the wearer to great contempt. Nor do they reject the dominion of women, if distinguished by birth. They have not only spirited horses, but adorn them with care, and in general the bits of the bridles are now of iron. The women ride like the men, and will undergo long journeys; but this mode is found to render childbirth difficult, by the pressure on the bones and cartilages. Two or three women or girls will mount one horse, though they possess many, for the sake of company and gossiping, being, as our author observes, sworn enemies of silence and soli-

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tude. The steeds being rarely broke to this burden often throw their fair riders, who on these occasions remount with great laughter. Though they can scarcely count any number beyond three, yet they are attended by a host of dogs, whom they call till none be wanting. These dogs are ugly, but sagacious, vigilant, and faithful. The widest rivers are easily passed in a dried bull skin, the sides being bent up to the height of two palms, and fixed with thongs. This mode is so safe and easy that our author recommends it in European campaigns. The dress of the Abipons, already mentioned, is decent, while the Mbayos, another equestrian tribe, cover every part of their bodies except those that nature dictates. The woollen garment is composed of threads of all colours, but seems rather to be in figures, than in squares like the tartan. Garments of feathers are not unknown, the most beautiful being like the Peruvian paintings, composed of those of the picaflor or humming bird. They use their captives with great humanity; and the wife of a chieftain will sometimes equip the horse of her slave. Our author struck with these and some other moral virtues, declares that while we send missionaries among them to teach revealed religion, they might well send some among us to teach the natural code of morals.

Our author is quite embarrassed with the multitude of languages in the viceroyalty of La Plata, most of which he regards not as dialects, but as radically different. The Quechua is not only general in Peru, among the creols and African slaves, but familiarly spoken in Tucuman. He regrets the imperfect specimens of the American dialects which have been published. His account of the Abipon tongue is singularly curious and complete, and ought to be studied by those who wish to examine the American languages and origins.* The speech of the Mbayos is remarkably soft and mellifluous, yet they are the most fierce and formidable of all the tribes. The language of the Guaranis is a dialect of the wide extended speech spoken by the Topayos of Brazil, and is perhaps more diffused than the Quechua itself, which however includes Quito on the north.

* The most peculiar sound is a guttural, composed of *r* and *g*, which seems to resemble the clasp of the Hottentots; and the words are often very long, as among the savages of North America. They use the masculine and feminine gender, and decline the nouns by prefixes.

The

The bride is bought by the future husband, the price being from **ABIPONS**, four horses down to a bottle of brandy. The difficulty of childbirth, if we credit the experience of our author, is always relieved by the juice of the common European cabbage, mixed with the red wine of Chili, a few leaves being bruised in a mortar. The husband instantly goes to bed, and is attended with great care; for in their belief any slight cold, or other little infirmity, attacking the father, would be destructive to his offspring: but he abstains from certain foods and performs as it were a penance. The tooth-ach is cured with cacao or beans of chocolate, infused in brandy for a few hours. Wounds are treated with the fat of the common hen, which the author declares from his own experience, having been severely wounded in the arm by an arrow, to be the most effectual remedy which he ever knew, as he was completely relieved in the course of a fortnight. In like manner the Russians stop even the commencement of mortifications with the preserved fat of geese. A disease almost peculiar to the Abipons is a species of madness, which seizes the patients in the evening; and if not prevented they would consume the night in mischief. The small pox and measles are very noxious on account of the thickness of the skin; nor are pestilential maladies unknown among the cattle. While our author resided near Cordova, in the province of that name, a fiery meteor appeared in the form of a broad beam of timber, and only disappeared when it reached the opposite horizon.* The superstitious reflected on this striking phenomenon when a dreadful cold or influenza followed, which destroyed vast numbers of Spaniards, creols, and negroes, in the province of Tucuman, and continued during two years. There being no regular physicians the rude practitioners pretend to examine the urine, and their directions are commonly ignorant and ridiculous. The dead are buried in woods and secret places, that the idea of death may not afflict passengers. If the dead bore the name of any animal, or other common object, the name is instantly abolished by public proclamation; and a new one imposed by some old woman, chosen for the purpose, who uses the first random word that occurs.† Thus among savages old

* The form and place singularly correspond with the block of native iron found in Chaco, and described in the account of La Plata.

† lb. 301.

women:

The

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women impose names, while among civilized nations they are sometimes occupied in divining whence they came: when neither in the origin nor explication is there any meaning whatever. The name of the jaguar was changed three times, during seven years that our author remained among the Abipons; and the words, which he gives, have no resemblance to each other. So much for etymology, in which the Abipons, as our author assures us, allow no guides nor judges except their old women.

The bones of the dead are raised after a stated period, and transferred to the family sepulchre. If a chief be slain in battle they are brought home with great ceremony.

In war the Abipons use long spears, even of the length of five or six ells, and our author compares them with the Macedonian sarissa.* The arrows are generally winged with the feathers of crows; and if these be the objects of the chase it may easily be divined that war is at hand. During battle the best arrows are always reserved for any great or unexpected occasion, of offence or defence. The string and balls, already mentioned, form a terrible weapon. Though cavalry they generally attack early in the morning, or late at night, that they may surprise their enemies; and being accustomed with great agility to turn under the bellies of their horses, they despised even European fire-arms, and after receiving the fire they instantly attack with the spear the now unprepared foe. The Indians are never less dangerous than when they assume the aspect of great force and courage; and most terrible when they seem to conceal themselves from fear. The account which our author reveals of the state of the Spanish troops sufficiently explains their weakness; and the Abipons used to laugh on their appearance. The muskets were so bad, that they could scarcely bear one fire; and even the art of making flints is totally unknown! Happy was the creol or negro soldier, whose piece had long passed all service; for thus seeming to retain his fire he held the enemy in awe. An old beadle with an old musket, which he occasionally levelled, thus escaped a general massacre of his fellow-citizens, who having wasted their fire

* Dobrizhoffer, 396.

were slain without resistance. The rich and intelligent are not seen in the Spanish armies, so that both officers and soldiers are poor and ignorant; nor have there been wanting examples of raw soldiers cramming six cartridges into their pieces, and afterwards demanding more from their officers, because, as they said, the barrel was not full. Hence, adds Dobrizhoffer, while formerly a hundred Indians would flee from ten Europeans, our times have repeatedly seen a hundred Europeans run before ten Indians. The Blandengs however at Santa Fe, in Paraguay, have often shewn distinguished skill and courage. The practice of scalping is also known among the Abipons, nor are they strangers to the ancient barbarism of drinking out of the skulls of their enemies; whence our author adds is derived the word *cup*, from the German *kopf* the head; and the *cranium* of the middle ages implied a cup as well as the skull. Victory is celebrated with a feast and songs, which are however very harsh and disagreeable; and even the festival often ends in blood, as he who is first drunk will begin to boast and affront the courage of the others.

The Araucans of Chili have already been described in the account of that country, as their history is intimately blended with its geography. But some tribes in the southern extremity of America deserve attention. In the account of the viceroyalty of La Plata an idea has been given of the country on the S. E. and of the chain of mountains called Gazuati, which is about the height of the hill of Montevideo, or fifteen hundred feet. At the mouth of the Rio Negro the land has been found fertile for a short space, on both sides; and the banks of that river are often woody, though the rest of the country be a sandy desert.* Around Port Deseado there is nothing but sand; while in the neighbourhood of San Julian there is much gravel upon a hard stiff soil. The Rio Negro, also called the River of Willows, from the abundance of these trees, is by the Indians named Colachel: and beyond there is a small chain of mountains, passing to the E. from the Andes, called Caquical, being of a white stone, which at a distance appears like snow. Before passing the Colachel, or Black River, the grand Andes of Chili appear; and, at

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* Edalla, xxvii. 329.

intervals,

were

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intervals, a far distant volcano displays its red flame on the western horizon, a beacon of the horrid warfare of the internal elements of the earth.

This volcano appears to be that of Oforno, also styled that of Huaynaga: and still further to the south are those of Huaytaca, lat. $44^{\circ} 20'$, and of St. Clement, lat. 46° ; which, with that of Giants lat. 52° , seem to be the only active volcanos observed in the southern extremity of the continent; but the Terra del Fuego abounds with these sublime objects. The Indians improperly called Pampas, or rather of the plains, have been mentioned in the account of La Plata. They are considered as bounded on the S. by the mountain Gazuati. Beyond them on the W. are the Puelches; and on the N. W. the Aucas, supposed to be the ancestors of the Araucans. The Tuelcos are on the banks of the Rio Negro or Colachel. Particular tribes have other denominations; but they might be solely divided into the Indians of the mountains, and Indians of the plains, each having a distinct language, and only these two dialects are used.

Patagons.

To the S. of all these are the Moluches and Tehuels, which last, according to La Cruz, are the celebrated Patagons of European voyagers, a name which seems capricious and of unknown derivation. Equally capricious is the appellation of Magellanic Lands, applied to the southern portion of this continent, and which one is surprised to find in the works of Dr. Robertson and other esteemed authors. For the name was given by Cluverius, and followed by De Brosse, solely in the imagination that there existed a great southern continent in this part of the world, where the high latitude, the very aspect of the Terra del Fuego, and other circumstances might have taught even a student of geography that nothing could exist, except fields of ice; and that, if there were any land, it must be as frozen, and as useless as the ocean.

The savages of this part of America differ little in nature or manners. All lead a wandering existence upon the chase, robbery, and war; but those of the hills, or rather of the vales among the mountains, have a few horses, cattle, and sheep. Among these the Aucas are the most civilized, and considering the circumstances may be named among the best tribes, as they cultivate their fields, sow wheat, raise the *camote* a kind

kind of potatoe, by them called *peni*, *cal* a kind of beans, *gua* or *maiz*, with apples, pears, and quinces. They are also possessed of goats, which are unknown to the other tribes. They have their little manufactures of wool and cotton; and even of silver, copper, and iron, for lances, stirrups, spurs, and female ornaments; but the metals are procured from the Spaniards of Chili, although there be gold and silver in the country. The Aucas are highly respected by the other tribes, who trade with them chiefly in articles which they have wrested from the Spaniards. But this industry is modern, and the fruit of constant warfare with their Spanish neighbours in Chili. The other mountaineers pass to Mendoza or Chili for the articles they want. Around the little settlements of Port Deseado and St. Julian the population is rare and poor; the greater part proceeding to the north in order to have opportunities to rob the Europeans. The Indians of the Pampas may amount to five or six thousand souls, with about one thousand warriors. The Tuelcos on the E. appear to be yet more numerous. They are divided into horse and foot, and are dreaded by the Indians of the Pampas, but they often join in attacks on the frontier. So attached are they to war that, in case there be no foreign enemy, one *aduar* or village of tents will make war against another. Their lances are generally of strong wild reeds, and so dangerous are they on horseback, that the Spanish fusileers sometimes cannot stand the charge. The head is large and makes a terrible wound, by which, as they express it, they may see through their enemies. The Spanish cavalry begin to find the carabine and cartouch-box of little avail in these rencounters, and prefer the spear, sabre, and pistols. The *bola* or *boul* is of stone or metal, the size of those used in billiards. It is fixed to a string about a yard long, and at the other extremity, by which it is held, there are some feathers of the American ostrich, or cassowary. It is turned round the head like a sling, and they can strike with certainty at a sufficient distance. The *bolas* or *bouls* have also been adopted by the Spanish soldiery, being two globes of stone or hard wood fastened at the ends of a string, and which not only serve to enthrall the wild horses and cattle, but also to annoy their enemies. Poignards, sabres, and cutlasses are more usual among these savages than the bow or the sling. During war

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Tuelcos, &c.

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they are all cavalry ; and many *aduars* or assemblages of tents join together to choose among the chiefs the most robust and valiant as general. They paint their bodies, but especially the face and hands with black and red, not only to inspire terror, but as a masque, that they may not be singled out by any of the enemy, for any personal reputation or offence. If the sons of chiefs be taken, they are not regarded as prisoners, but dismissed from respect to their rank. The tents or hovels of all these tribes are similar, being composed of hides of horses, beeves, or other animals, and arranged in streets. From the description, which is not very clear, it would seem that those tents form, as it were, one house, like those of the savages in the Pampas del Sacramento, as sometimes the village or continuous tent may contain five hundred souls. The tent or apartment of the cazic is distinguished by painting and superior arrangement. When the camp or village is raised, for the sake of superior pasture, chace, water, or wood, the whole is mounted on horseback ; this toil, like the domestic economy, belonging to the women. The common food is the ostrich or cassowary, *quiri-quinchos*, and *mulitas*, a kind of armadillo ; but their chief regale is the flesh of the mare, or the foal, which is preferable to that of the *anta*. In case of pressing thirst and necessity, they will drink warm blood which they draw from their horses.* In both these customs they resemble the Tatars ; but similarity of manners is very far from establishing identity of origin, for before the arrival of the Spaniards these savages had never seen a horse. The want of food is supplied with bones, grease, and dry dung. The use of clay is universal, in making various sorts of earthen ware. They eat salt with their meat roasted or boiled, and are no strangers to some preparations of milk. The Seranos or mountaineers make a paste of carobs, of which they form their bread in loaves called *pateis*. In Tuelca, as in the other southern parts, the guanaco abounds, whose flesh, with that of a kind of hare, forms the chief food of the Tehuels or Patagons. But the flesh is eaten half raw, and they laugh at the Spaniards as losing the juice and the nourishment, by too prolonged a mode of cookery.

* Estalla, xxvii. 338.

The dress is a mantle, which extends to the mid-leg, with an opening for the arms, and girt with a leathern belt: on horseback the skirts are drawn together so as to form loose breeches. This dress is called *quillapi*, and the belt *yuqui*. The females are attired in the same manner. Though they make these clothes of wool, yet the skins of the guanaco, the puma or American lion, and the jaguar, tiger, or rather panther, are preferred; and the Patagons use those of seals. The Pampas Indians have hats made of reeds; the Patagons *monteras* or coarse woollen caps. With the skins of these animals, but particularly those of foxes and *aguarachas*, they make handsome carpets, which are esteemed at Buenos Ayres; and, even at Madrid, warm the tender feet of the Spanish fair. With the feathers of their ostrich they make fans, and ornaments for bridles, staining them of various colours. All these articles they exchange for tobacco, brandy, and the tea of Paraguay, articles with them of great luxury, and indispensable on a journey or any negotiation. Hardware, and coarse woollens, are also esteemed. The brandy they exhaust at once, leaving none for to-morrow. The herb or tea of Paraguay, after having served once, is dried, and again used, and finally eaten. The tobacco is smoked in a wooden pipe of a peculiar fabric. There is some distinction between the families of the cazics, and the others; and they generally marry their equals. The cazics and captains have several wives, otherwise monogamy is prevalent. Jealousy is little known; and a payment in kind the usual penalty of adultery. Homicides are however frequent; and duels nearly as common as among the savages of Europe. These open conflicts are esteemed honourable; while treason or assassination are capital crimes, and the guilty put to death with lances or wooden clubs, there being no churches to protect murderers as in Italy. Though all be thieves, they object to being the patients; and will make war on a tribe that protects robbers. In each *aduar*, or tented village, there is a person revered as a forcerer and physician. He is called *machy*, and he regulates their determinations, by invoking one *Gualechi*, the supposed father of magicians. If he tell them that the foe is at hand, they prepare for war, imitating the Spanish cavalry, though sometimes a bunch of reeds

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serve as a saddle, while the bit is a bone or piece of wood. Few are without stirrups, though they seldom use them; and the spur is often a sharp bone. In the night they have no light, but that of fire, which they procure by friction of hard wood. Such is the violence of their fights, that few are seen without marks of deep wounds: but though the children be educated in a hardy manner, they are not found to exceed the Spaniards in strength. The desire of revenge passes from generation to generation. They celebrate their victories with dancing, singing, and drinking; and on these occasions are beautifully or nauseously painted and adorned with plumes, and *cascabels*, or little hollow bells, like those of the tambourin, an ornament of which they are excessively vain. All the decorations that are the fruits of robbery entitle the wearer to respect and admiration. Their number is greatly reduced by the small pox. Aware of the contagion, they leave the patients with food and drink, returning every three days on the windward side with a fresh supply. The mother stands during parturition, and goes directly with her offspring to the nearest water. They have no religion, but seem to contemplate with reverence the sun whom they call *Antu*, and the moon *Quien*. The only ceremony that looks like religion is when they kill a beeve, some of the blood being sprinkled on the ground, with the formulary, "Give me to eat, me, and my people." They think that the moon confers strength and valour; and when the new moon appears they present their infants, and say, "make them strong." They also pray to *Quien* for courage and strength to avenge injuries, and destroy their enemies. There are little hopes of their conversion: the jesuits having planted a missionary settlement on the mountain Gazuati, the missionaries were slain, and the few christians dispersed.

So far Estalla, but a few remarks may be added from Falkner, an English missionary, who has published an account of Patagonia. Towards the east are vast saline plains, called by the Spaniards Comarca Desierta, or the desert territory, whence the desert of Comarca in our maps. The natives are described by Falkner, who says that a cacic of the Puelches or Patagons, with whom he was acquainted, was seven

feet

feet and some inches in height.* The Puelches, by his account, are divided into three or four tribes, the most southern being the Tehuels, extending on the east to the straight; as the Huilliches, a tribe of the Moluches, do on the west. The Tehuels are the proper Patagons, and may be called the Tatars of South America, being wandering warriors, but courteous and humane. The dead among the Moluches are buried in square pits, in a sitting posture, with their weapons and drinking utensils; and an old matron annually opens the grave to cleanse and clothe the skeletons. Around are those of the slain horses, supported with props. The Tehuels, after having dried the bones of their dead, transport them to the desert on the sea coast, where they are placed in huts or tents, surrounded by the skeletons of their horses; but the latter practice must be of comparatively modern date. These tribes, like the Araucans, have hereditary cazics called Elmens or Yas: and they sometimes choose an Apo, or commander in chief, whence they are more formidable to the Spaniards than the northern tribes. The wives are sometimes bought very young, at the price of beads, cascabels, (or little hawks' bells), garments, or horses: and polygamy is common. According to our author, the language of the Moluches is more copious and elegant than could have been expected, the verbs having three numbers, and as many tenses as the Greek. The maps published by our author are certainly erroneous, and bear little resemblance to that of La Cruz, except in the position of the tribes; but it appears from Dobrizhoffer that the author, Thomas Falconer or Falkner, was a well known missionary in South America. The singular aspect of Patagonia, delineated with innumerable streams ending in little lakes, may well appear, (without the assistance of La Cruz, who has only represented four of that kind), as foreign to the course of nature. Yet this country has many singularities. There is an immense tract of territory impregnated with nitre, about 600 miles in length and 150 wide, on the south and

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* The stature of the Patagons measured with great exactness by the Spanish officers in 1785 and 1786, was found to be at the most seven feet, one inch, and a quarter: and the common stature from six and a half to seven feet. *Viage al Esfuerzo de Magallanes*, Madrid, 1788, 410. p. 325 & seq.

New Granada boasts a giant, who attained the height of more than seven feet five inches Spanish measure. *Merc. Eur.*

west

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west of the river Parana, and even to the junction of the Paraguay, all the springs and rivulets being more or less saline. No productive mines have yet been discovered; except some of silver, near Mendoza, at the bottom of the Andes. "The rivers that wash this country all come from the high mountains of Yacanto, or Sacanto, Champachin, and Achala on the W. of Cordova, which are little inferior in height to the Andes of Chili, and are a kind of branches of those of Peru."

RECENT DISCOVERIES, 1790—1800.

Names and
Extent.

THE Spanish accounts of the interesting territories called *Montana Real*, and *Pampas del Sacramento*, are written in a perplexed manner, with many chronological transpositions, and trifling particulars, concerning the progress of the ancient missionaries. To obtain clear ideas on the subject it is proper to premise, that the *Montana Real*, in its original strict acceptation, implied a mountainous region of no great extent to the E. of the provinces of Tarma and Guanuco; while the *Pampas del Sacramento* are properly the immense plains between the Gualaga and Maranon, W. and E. bounded by the Tunguragua on the N. The names *Montana Real* and *Pampas del Sacramento* have not only been confounded; but the latter in particular has been carried to an amazing extent, so as to include the vast territories on the N. and S. of the Maranon, as far as the line of demarcation with the Portuguese settlements.*

In this portion of the work, the manners of the native tribes are intermingled with important geographical discoveries, and the compositions of the missionaries being rather perplexed, an abstract shall be added at the end; which joined with that given in the general view of the rivers of South America, will it is hoped afford complete and precise ideas on a subject, not only new and surprising in itself, but forming one of the greatest improvements in geography, which has taken place for a century.

* In this acceptation the medial length from the country of the Mojos, 15° S. lat. to the river Guaviari, N. lat. 3° is 18 degrees or 1080 g. miles. The breadth depends upon the Portuguese frontier, but the medium may be 10°, or 600 g. miles.

The name of *Pampas del Sacramento*, Plains or rather Stepps of the Holy Sacrament, was imposed by the pious fathers on an enormous territory, watered by the Ucayal or genuine Marañon; and which they fondly represent as being as large as Europe; but are more to be credited when they inform us that it is about 8000 leagues square, and might maintain in great ease and abundance five millions of inhabitants. Here, in the opinion of the first conquerors, reigned other Motezumas and Atahualpas, while, in truth, only a few savage tribes have been found; and the imaginary empires have vanished like El Dorado and its city of Manoa, (a name which merely implies *lake* or *water*, and is that of a river in the Pampas del Sacramento;) like Enim, the fabulous imagination of Boorquez 1635; like the great Paytiti, like Quevira, and other poetical sovereignties.*

The recent discovery of the Pampas is chiefly owing to father Girval, who has navigated about 400 leagues S. to N. and 70 W. to E. on the grand and genuine Marañon, and has inspected and described the country with considerable care. He has discovered twenty five nations, or rather tribes of Indians; of whom he pretends to have converted four, the Panos, Cambos, Chipeos, and the Piros. The common deity of all the tribes he found to be the moon, they probably thinking with the French soldier, that the sun deserves no gratitude, because he always shines by day: but they dread a demon called the *Nugi*, whom they regard as the author of all their calamities. After eating, they summon with a loud voice their neighbours and the passengers to share the remains of their repast, which is abundant; but the tapir and the monkey, the *javala*, and other animals, supply the want of the horse, the cow, and the sheep; and the birds are neither cleaned nor unfeathered. The fish may be said to roll in heaps. The *gucma* of enormous size forms a part of the festival, with the *manati* or sea cow, which weighs between four and five hundred weight; and tortoises of eighty or ninety pounds. They are killed with harpoons, armed with sharp fragments of shells; and

Singular
Tribes and
Manners.

* Estalla, xx. 172. He often borrows from the *Mercurio Peruano*. The first number of the *Mercurio Peruano* appeared on the second of January, 1791; a quarto sheet, or four leaves, of closely printed text being published twice a week, so as to form three volume yearly. It was strongly opposed by the clergy, and at length suppressed, though replete with the purest morality, and the most important public instruction!

steel

SINGULAR
TRIBES AND
MANNERS.

steel hooks, communicated by the missionaries, were to them the first of all inventions. No chief is acknowledged, except during war, when he who is believed to have most courage and cunning is elected; but before he assume the command, he is submitted to many cruel proofs, as practised among the celebrated Araucans of Chili, one of them being a severe whipping, which the future general must bear without a murmur. The men wear a kind of tunic of coarse cotton; while the women only gird their loins with the *chitundi*. But the head is adorned with the brilliant plumage of native birds, and the bodies and face are tattooed with various colours; the natural man having no idea of natural beauty. Women and children alone become captives, the men being irremissably slain. Some tribes are more courteous and humane, while others, as the Casivos and Carapachos, are anthropophagi. The latter, however, and the numerous tribe of the Chipeos, are of so fair a colour, and so ample a beard that they resemble Flemings. The Carapachos are about 8° S. lat. on the banks of the river Pachitea, which runs into the grand Marañon, and the Chipeos, at 7° 35'. The observation is truly singular and surprising; and, like the negro tribes found on the frozen mountains of Tibet, defies all the theories of the influence of climate upon the human race. Among all the nations on this part of the genuine Marañon, circumcision is practised among the men, and excision among the women. Among the latter it is used at the age of seven, eight, or nine years, as in Arabia; but the Arabian damsels are already grown, while among the tribes of the Marañon, it is mere wantonness. Polygamy is general, and the wives are frequently repudiated, but may wed other husbands. Two sisters are often married to the same husband, and caprice alone regulates their connexions.*

These tribes, and those more to the east, do not live in villages, but in vast hovels, divided into three naves, with windows in the roof. These houses are one or two *quadras* in length;† and the families, separated by rude partitions, would be sufficient to form a village. They are at the distance of a league, or sometimes only half a league from each

* Some compositions derived from the vegetable kingdom are reputed *ptiripiri*, or aphrodisiacs. Una de ellas, tragada, se cree disminuir el volumen de ciertas partes del sexo femenino, y mejorar su conformacion. Some tribes disinter the dead like the Africans.

† The *quadra*, as already mentioned, is an arbitrary measure, but is roughly valued by Ulloa, i. 231, at 100 yards or 300 feet.

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other; and are distinguished by the names of snakes, fish, birds, quadrupeds, trees, and other arbitrary appellations, which might afford constant surprise to the European etymologist and antiquary, whose theory supposes that the situation alone gives the appellation.

The pregnant women being neglected by the men, many procure abortion; while others drink decoctions to procure barrenness, and if unsuccessful, throw their babes into the rivers. Those on the banks of the Napo, which joins the Maranon from the N. are said not to be averse from war; and having been lately visited by Requena, he found that when the husbands were absent, hunting, or fishing, they were ready to defend their hovels and children. This circumstance having happened when the Spaniards first explored their country, the name of Amazons was idly applied to these females on the majestic river which flows from the environs of Arequipa to the Atlantic Ocean, to which it carries war, rather than tribute by an estuary forty leagues in breadth. The women of the Omaguas, on the banks of the Yupura, which likewise joins the Maranon from the north, (for it would appear that the Pampas del Sacramento, or at least the country of the Missions, extends on the north as well as on the south of the Maranon, as far as the Portuguese settlements of Brazil)* go wholly naked, and amuse themselves with keeping little monkies as the European ladies with lap dogs. Requena, when employed on the line of demarcation between the Spaniards and Portuguese, taught the Omaguas to make bread of the yuca. The Guaguas, another tribe on the Yupura, are anthropophagi; and return from war with the hearts of their enemies fastened round their necks. They even salt human flesh, and regard it as a most savoury regale. These savages run like hares; and, by compression from infancy, reduce their bellies to an inconceivable smallness. Of the Supebos, on the river Pisquique, some are remarkably fair; and they use a neat dress in the form of a tunic. The Yuris, on the river Potumayo, are noted for their skill in poisons. The Iquitos, on the spacious banks of the Nanay, are dextrous at the lance: and are the

SINGULAR
 TRIBES AND
 MANNERS.

* It would be more just, as already mentioned, to denominate the whole of this prodigious territory, COLONNA, after the Spanish enunciation of the name of the great Colon, the discoverer of America.

Antillon, *Anal.* Madrid, 1803, has conferred the name of the SEA OF COLON, on what is called the Caribbean Sea.

SINGULAR
TRIBES AND
MANNERS.

sole tribe yet discovered, which adores rude statues of quadrupeds, birds, and reptiles. The Casibos, on the Pachitea, which is joined by the large river Mayro, are also anthropophagi; and do not hesitate, when suffering by famine, to kill each other by surprise. The Amachucas on the river Abujay, which joins the grand Marañon from the E. and by which the Portuguese might enter the Pampas del Sacramento or new country of Colonna, are of large stature and corpulent. They are always engaged in war, and do not believe that there are any nations in the world, except those on the rivers Marañon and Abujay. The Carapachos, already mentioned, on the river Pachitea, are as fair as Germans, and have beards like the Europeans; but go naked, and are anthropophagi. Our missionary asserts, that this nation is of unrivalled beauty, the women being equal to the Georgians or Circassians. Yet the guttural pronunciation is like the barking of dogs; and when they speak they strike on their thighs with great noise. The Capanaguas, a tribe on the river Mague, dress and eat their dead; and think this action meritorious: they are however one of the most humane tribes.

Rivers.

Our enterprising author observes, that all the streams in this quarter, which descend from the Andes, join to form the enormous river Marañon; but the chief are the Lauricocha, or Tunguragua, falsely called the Marañon; the Gualaga, the Yavari, and the Madera, or properly Llavari. The latter belongs to Portugal; and receives the Guapore, the Irabi, the Baures, on the confluence of which the Spaniards held Santa Rosa, before that territory was seized by the Portuguese. The Madera is almost wholly navigable, and for a great part by ships of a moderate size; the sources being in the province of Santa Cruz de la Sierra. Along the Marañon are villages well fortified as far as the fortresses of Sapatinga, the nearest to the Spanish territory, with a competent artillery, situated five leagues above the mouth of the river Yavari, which is about 10° 30' E. long. from Lima.* There are many villages of the Mojos

* *Est.* xx. 189, 192, but he, or his printer, has twice put *Llavari* for *Yavari*.

M. Godin, in his letter to Condamine, (*Voyage de Condamine*, ed. 1778, 8vo. p. 338.) observes that Loretto was, in 1765, a new mission founded below that of Pevas, and the furthest which the Spaniards then had upon the Marañon. He also adds that Sapatinga had been recently founded by the Portuguese, as a missionary establishment above that of St. Paul, formerly their furthest settlement upon the Marañon. But San Pedro had already been marked by Condamine to the W. of St. Paul.

on the great river Llavari, which is also called is called in different parts ^{RIVERS.} of its course, the Mamori, Hayapey, and the Great River, the sources being in the vast transverse chain, which passes through the province of Santa Cruz de la Sierra towards Brazil; where the river Pilcamayo also rises, and runs in the opposite direction to the Paraguay.*

To these important geographical notices concerning the rivers of ^{Mountains.} the new territory, our author adds some account of the mountains. † Besides the grand, or what is styled by the Spaniards the Royal Chain of the Andes, which is between the Montana and the Sierra, from Potosi to the Laurichoca; and also that which runs, clothed with snow, between the coast and the Sierra, from above Cuzco to the heights of Huaylas and Huamacheco; there are other particular chains, which descending from the main ridge of the Andes, penetrate the interior, and are cold though not covered with snow; the principal being the following. First, the chain on the E. of the Ucayal or true Marañon, which though not equal to the Andes, is of considerable height, passing from the high mountains of the province of Sicaica, between the rivers Yavari and genuine Marañon, and between the river Beni and the Mojos. Secondly, another which descends from the South to N. between the Callas and Carabaya, dividing the Beni from the Quillabamba, to the mouth of the river Tarma on the E. Thirdly, another which runs about a hundred leagues W. to E. between the sources of the Pachitea and the river of Tarma, from the heights of Reyes to near the junction of the Beni with the Apurimac or Marañon; whence its direction passes N. about sixty leagues to the heights of San Carlos, nearly accompanying the Marañon itself, which runs on the E. of this chain, till near the confluence of the Pachitea. Fourthly, another ridge which passes between the Gualaga, the Pachitea, and the Marañon, whence flow the western rivers which join the Manoa. Many other branches of hills run in diverse directions giving birth to various rivers.

* According to La Cruz, the Mamori is the same with the Madera. The Beni, as already mentioned, does not join the Madera but the Marañon, which seems rather to confirm the tradition that it was discovered by the Inca Yupanqui, in an expedition against the Mojos. The delicious river Pachitea, which joins the Marañon about a hundred leagues of navigation above the Beni, is not described by Alcedo, who refers us to the river Manoa, as if it were the same, while he describes neither! The map of La Cruz, 1775, is equally defective.

† Ed. xx. 193.

FACE OF THE
COUNTRY.

The Pampas del Sacramento are divided from the Sierra, or the hills of Peru, by a lofty chain from which this vast country appears so level that it resembles the ocean. The perpetual verdure of its fields forms a delicious perspective; and for some hours in the day there is so thick a fog on the tall trees, that the clouds seem to be under your feet. Rain and thunder are frequent. The thickness of the woods prevents the sun from warming the air; and the mountains and plains being covered with forests, the warmth and moisture give birth to an innumerable quantity of insects and reptiles.* Many of the vegetable products are rare and singular. Balsams, oils, gums, resins, incense, cinnamon, though inferior to that of Ceylon, cacao, cascarilla, the *pucheri* an excellent spice, are all abundant. But the warmth and humidity render a country equal in size to an Asiatic empire almost uninhabitable; and even the few tribes on the banks of the rivers rarely see a man of the age of fifty. Yet the missionaries have founded several villages, of which Manoa is among the Panos. The Piros, near the junction of the Beni with the Apurimac, are also partly converted; but being a ferocious race, the missionaries wish to establish an intercourse by means of the rivers Mayro and Pachitea. On the Gualaga there are ten villages of the old missions; and three on the Mantaro on the frontiers of Guamanga.

Passages in
the Andes.

New entrances have been found to the Montana Real, Pampas, or rather great territory of Colonna, since the late missions were established. The eastern chain of the Andes is extremely elevated and abrupt, on the *western side*, full of precipices, and morasses of melted snow, so as to form as it were a bulwark, dividing Peru from the barbarous tribes on the E. Hence the slowness of the discoveries in this direction, the countries beyond being regarded as another world.

The first missionary pass is from Guanuco, another from Tarma.† That from Jauja, by Comas and Andamarca, was used in 1673 by Biedma and Solier; who also found the road by Guanta. Some have

* Our author assures us that there are serpents of the enormous and incredible length of forty yards, and four in circumference, exceeding in size any to be found in the East Indies!

† In 1785 the coffee-tree was discovered in the province of Guanuco.

It is said that on the banks of the Gualaga, there is a small animal resembling a dog, which shines in the night, but hides its light on the smallest noise.

also passed from Chachapoyas to the junction of the river Moyobamba with the Gualaga. Another route has been found from Huamalies to the river Monzon, which was examined by father Alvarez de Villeneuve in 1788. This learned missionary was at Madrid when Estalla wrote, and communicated to him much curious information: he was employed in soliciting the impression of a valuable work which he had composed concerning these missions. From the province of Pataz, there is also entrance by three passages, the most remarkable being that of the Incas towards the river Gualaga. In 1788, there were a hundred and three villages, or missionary stations in this quarter. In 1791, the viceroy of Peru received a royal order to extend and secure the labours of the missionaries, in consequence of which the travels of father Girval were executed.

PASSAGES IN
THE ANDES.

But the importance and curiosity of the subject will warrant some further details. The insurrection of Juan Sanches, called Atahualpa, who pretended to be descended from the Incas, in 1742, occasioned the utter destruction of many missionary stations on the E. of Tarma, Huamalies, and Caxamarquilla. In 1754, the missionaries resumed their cares in the district between Caxamarquilla, or Pataz, and the river Gualaga; perhaps the only portion styled at first the *Montana Real*, being probably an upland plain, for a chain of mountains on the E. separates it from the vast territory so absurdly called, *Pampas del Sacramento*.* This ridge having been passed at different times, the river Manoa was discovered in 1757. A tribe was discovered which had been converted about 1660, but afterwards abandoned to themselves, as there were many ferocious tribes in the vicinity. They continued to believe in God and Jesus Christ, and to place and adore the cross; but so much had been said of the Virgin Mary, that they believed her to have been the creator of the world, and to continue its ruler and preserver. The new missions of Manoa were scarcely established, when, from an ancient map preserved in the religious college of Ocopa, it was discovered that by the route of Pozuzo, embarking on the river of that name joined by the Mayro,† a navigation was opened by the Pachitea to the rivers Ucayal or Maranon, and Manoa. But when these missions were explored in 1767, it was found that all the preachers had been slain. The territory being justly considered as

Progress of
Discovery.

* Estalla, xxi. 105. † The Pozuzo is a local name of the Pachitea.

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PROGRESS OF DISCOVERY. of extreme importance, arrangements began to be made for a more effectual settlement. At length, in 1790, father Sobreviela was sent to explore those vast regions; and was followed by father Girval in 1791 and 1792.

Extent. The prodigious Stepp or Plain, rather territory or empire, called the *Pampas del Sacramento*, had been discovered on or about the 21st June 1726, by the Neophytes of Pozuzo, of the missions of the Panataguas on the N. of the province of Guanuco: and the appellation of the Sacramento, because the discovery was made on the feast of Corpus Christi, was worthy of the inventors. This country was considered as being bounded on the S. by the rivers Pozuzo and Mayro; on the W. by the Gualaga, on the N. by the Laurichoca, Tunguragua, or false Maranon, and on the E. by the genuine Maranon or Ucayal: but the boundaries, as has already been seen, are now considerably augmented, and the country found so diversified, that the appellation has become ridiculous. So wide is the territory, so powerful are the streams which water this singular country, that a vast commerce might be opened towards the N. E. and S. and small ships might enter the Atlantic by the Orinoco, the Maranon, or the Parana. The terms *Amazonia* or *Land of the Missions* are equally absurd.* On the E. it was considered as bounded by a chain of the Andes, passing between the Gualaga and the Mayro; and the rivers flowing from these mountains were found to roll gold in their sand. Pearls were found in the Moyobamba: the shores of the Ucayal or Maranon presented tortoises two yards in length, and one broad; and they laid in the sand to the number of two hundred eggs. The four chief tribes in the Pampas del Sacramento were the Supebos, Setebos, Panos, and Cocamas.

Voyage of Sobreviela.

In 1790, as already mentioned, father Sobreviela, guardian of the college of Ocopa, performed a remarkable voyage on the river Gualaga. This river rises S. lat. $10^{\circ} 57'$, under the name of the Guanuco, from

* It here appears, Ed. xxi, 113, that the eight thousand square leagues, and the five millions of inhabitants, are computations only applicable to the *old boundaries* of the Pampa del Sacramento.

The ingenious editors of the *Mercurio Peruano* have subjoined some notes to the original accounts. It appears, from some old manuscript travels of the missionaries, that by the *Pampas del Sacramento* was understood the immense plain between the Andes and the mountains of Brazil, a space indeed nearly equal to Europe.

the lake Chiquiacoba in the plains of Bombon, whence it passes to the N. receiving several rivers, and reaches the vicinity of the town of Leon de Guanuco $10^{\circ} 3'$. After a precipitous course it receives the river Monzon, from the W. at N. lat. $9^{\circ} 22'$, when becoming more tranquil it forms several islets, and in the province of Lamas acquires the name of the Gualaga. At $7^{\circ} 10'$ it receives from the left or W. the river Moyobamba. After this there are four dangerous rapids, before reaching Ponguillo, at the extremity of the mountains. The breadth of the Gualaga is now about four quadras;* and passing through the province of Maynas at $5^{\circ} 4'$ S. lat. it joins the false Marañon, being 450 yards wide, and 34 deep, according to Sobreviela, who measured it with exactness, in the company of Salinas an intelligent officer. At the confluence the Gualaga is divided into two branches, and a lake is formed about half a league in breadth, and seventy fathom deep. During the space of a league the force of each river seems equal; but at length the Tunguragua or jesuitic Marañon overcomes the Gualaga.

Leaving Ocopa in July 1790, Sobreviela passed by Tarma and Pasco to the city of Guanuco, distant from the college fifty-six leagues of regular road. Thence he proceeded to inspect an intended communication of sixteen leagues, from Pozuzo, to the river-haven of Mayro, with a bridge over the Pozuzo. With spiritual doctrines to the natives, the good father mingled lessons of agriculture; and gave the necessary utensils of iron, which are regarded as a fortune by the poor Indians. The journal of his navigation upon the Gualaga needs not be followed. A hill was observed, covered for the space of a mile with white, red, and black rock salt, of an excellent kind. He was afterwards joined by father Girval, curate of Cumbaza, whom religious zeal prompted to visit the Manoa, a large river which joins the Ucayal or true Marañon from the W. The rapids may be passed by keeping on the quiet side of the river. At the Salto or rapid of Aguirre, the chains of mountains join on either side, and form the Ponguillo, so called from a word in the Quechua or language of Peru, *puncu* signifying a door; and is a term generally applied to the narrow and tremendous outlets, where the rivers pass the chains of mountains. These passages in fact

* Twelve hundred feet.

VOYAGE OF
BODREVIELEA,

form, as it were, gates where you pass from one world to another; and the objects and ideas undergo a complete change. The eyes accustomed in Peru to behold lofty mountains whose summits are lost in the clouds, are now surprised with a large plain extending like the ocean, and of so deep a soil deposited by waters, that for a space of four hundred leagues the inhabitants do not know the existence of stones; so that when they arrive in their canoes at Borja or Lamas, they are struck with admiration at the commonest pebbles, and begin to load themselves with them as if they were diamonds, till at length finding them common, they throw them away with shame and indignation. These immense plains, shaded with forests of eternal verdure, which wave before the wind, and where the view only terminates with the horizon, contain lakes and seas of fresh water; while the isles and havens are inhabited by tribes greatly diversified in their manners and customs, and manner of thinking.

After passing the mountains, the Gualaga begins to spread, and to roll with such serene majesty, as to be navigable day and night; while its banks, covered with lofty palms, and trees of every leaf, are enlivened by numerous birds of the richest plumage, and most diversified song, forming a scene of enchantment. The prospect is further enlivened by the numerous canoes of the provinces of Maynas, some loaded with salted fish to sell in Lamas; while the crews of others are occupied in gathering the chocolate, produced in abundance in these immense forests, or the honey made by diminutive bees, who lodge their treasure in hollow trunks. The women accompany their fathers and husbands; and appear like naked nymphs amidst the trees of this magical forest. But these mortal dryades are tormented by the musquitos, and shriek on discovering the lurking cayman, an animal which abounds in the waves of the Gualaga.

At 6° 33' the Chipurana enters the Gualaga, on the side of the Pampas del Sacramento, or E. so that the passage from the Gualaga to the Marañon may be expedited by means of that river. The next remarkable object is the missionary village of Yurimaguas, the first settlement in the province of Maynas. Here our traveller beheld the Indian method of catching the tiger or jaguar, in a kind of trap formed of stakes, where he is easily killed with clubs or arrows. He soon after arrived at La-

guna, the capital of the province of Maynas. At 5° 14' S. lat. the lake of the great Cocama, by a narrow channel, enters the eastern side of the Gualaga. This lake is about a league and a half in circumference; and on the bank is a dry and elevated soil, a rare circumstance in these regions, on the top of which stands the settlement, where reside the president of the missions, and the lieutenant-governor; these missions having been a fruit of the zeal of the jesuits, who vainly included the Maranon (in fact the Tunguragua) in their spiritual empire. The number of christians is 8895, with 19 curates, and a superior of the missions; the former having each 200 dollars a year, and the vicar 333, paid at the treasury of Quito, and chiefly remitted in effects; while the Indian servants hunt and fish, and labour little fields of rice and sugar canes. The military governor ought to reside at Omaguas; and there is a lieutenant-governor on the spot, who is assisted in minute affairs by a cazic of the Maynas. Boys of ten or twelve years are, with pleasing policy trained to the magistracy, being annual inspectors of the conduct of their comrades, correcting small offences, and reporting any rare examples of crimes to the judges. Thus offences are avoided, and youth are trained to honour and good conduct. The villages of Maynas trade with each other, and with Quito and Lamas, in salted fish, chocolate, of which the arroba, a weight of 25 pounds is sold for two rials, wax, yuca, and vegetable candles, called by the natives *passas*, being the fruit of a tree, which, when lighted, presents at once wax and wick; but it is not known whether it be the *croton sebifera* of Linnæus, or some species of the wax shrubs, which are found in Louisiana and China. There are also some poor manufactures, the chief being cloaks and hats, made of the rich plumage of the birds, with which they copy any pattern. The manners and customs of the Maynas differ little from the other nations of the Pampas del Sacramento, except where tinged with a faint dye of christianity.

Father Sobreviela having concerted a plan, in order that his coadjutor Girval, should explore the Ucayal, or true Maranon, (a new enterprise which had been commenced by Valverde president of the missions of Maynas), began to remount the Gualaga, at the rate of three quarters of a league in the hour; arrived at the confluence of the Monzon;

VOYAGE OF SOBREVILLA. and passed by Tarma, and the source of the Tunduragua, which is the lake of Lauricocha, situated in the plains of Bombon, $10^{\circ} 14'$, being about a league long, and half a league wide. Near its source the Tunduragua is already 25 yards wide, and one deep, when the waters are low. Where it issues from the lake, there are large stones, well worked, about a yard and a half square, and placed at the distance of a yard from one side to the other, the remains of a bridge of the Incas, and at a little distance there is a royal road. This journey is not a little important, as it considerably improved the geographical knowledge of the country and rivers; and shewed the facility of establishing an intercourse between Lima and the province of Maynas, by which means not only a considerable inland trade might be conducted in cinnamon, tortoise-shell, incense, indigo, and other rich and singular products of the new territory; but, in case of necessity, a messenger might pass in three months from Lima to Madrid.*

Voyage of Girval.

The voyage of father Girval is yet more interesting, as he in part explored the Ucayal or genuine Marañon, hitherto a great deficiency in American geography. The observations concerning the wilful error of the Jesuits, who, to serve their idle ambition, first baptized the Tunduragua with the new name of Marañon, have been already given in the general account of South America. The Apurimac, Ucayal, or true Marañon rises, as there explained, in the Paramo, or high desert of Condoroma, in the province of Tinta, otherwise called Canes and Canches, according to our author; but by the map of La Cruz, to the S. of

* This new and striking route is thus allotted:

Lima to Guanuco	-	-	60 leagues, 8 days.
Guanuco to Playa Grande, the port	-	-	30
To the river Moyobamba	-	-	111
To Yurimaguas	-	-	63
To Laguna (a settlement on the lake Cocama)	-	-	40
From Laguna to Tefi on the Portuguese boundary	-	-	8 days.
From Tefi to the mouth of the Marañon	-	-	15
			45

The remainder is for the voyage to Spain. It would be truly singular to see Guanuco become a mart of trade between Europe and Peru; and European vessels mounting the grand rivers that pervade the upland plains of the Andes, ten thousand feet above the ocean!

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the grand mines of Cailloma, in the province of Collahuas. Embarking on the lake of the great Cocama, father Girval proceeded to Omaguas, at the confluence of the Marañon and Tunguragua, commonly called St. Joachin, as distinguished from St. Pablo or St. Paul de Omaguas, one of the first Portuguese settlements at the linear distance of about three degrees, or 180 g. miles to the E. Having two canoes with fourteen Omaguan Indians, robust and dexterous rowers, he soon passed from the Tunguragua into the Marañon; which he ascended with a perseverance worthy of the curiosity and importance of the enterprise, though he sometimes met with little fleets of canoes filled with Indians of unknown tribes, whom his experience enabled him to soothe and escape. The Conibos will employ an entire year to hollow out a canoe from one tree, sixteen or twenty yards in length, and from five to seven quarters broad, which is accomplished by the means of sharp stones and fire. The poop is square, and the prow drawn to a pyramidal point. The Conibos had among their slaves some of the Mayoruna tribe, who dwell towards the sources of the river Tapichí, and are called Barbudos, because their beards are as strong and abundant as those of the Spaniards; but they are believed to be descended from Spanish soldiers, scattered in these forests in the affair of Lope de Aguirre and Pedro de Orsua. After fourteen days of navigation, appeared on the W. a chain of mountains, running S. E. and N. W. Two days after they arrived at the little settlement of Saraiacu, among the Panos, and soon after reached the habitation of Anna Rosa, an Indian lady, educated at Lima, who greatly lamented the tragical death of the missionaries in 1767, committed by the Chipeos, who had been severely chastised by her nation. Continuing the ascent, he reached the mouth of the river Manoa, also called by the Indians Judiabatay, on account of the rapidity of the stream, which he however ascended, in order to discover a nearer passage from the Gualaga to the Marañon than the circuit by the Tunguragua. The passage by land was found difficult and dangerous, on account of the thick woods and precipices; and a large river which was discovered, being found to be the winding Manoa, instead of the Gualaga, our traveller descended the Marañon, and arrived at the missions of the Maynas, and soon after at Cumbaza, after an absence of four months. Though this first voyage

VOYAGE OF
GIRVAL.

Saraiacu.

Manoa.

VOYAGE OF
GIRVAL.

Tribes on the
Maranon.

did not answer the expectation, yet it served to obliterate the idea of the cruelty of the nations on the Maranon.

The Indians in general were found to be tall and robust, and the Conibos would vie with Europeans in fairness, if they did not discolour themselves, and suffer moreover from the stings of the musquitos. They bind their children with bandages of flax, that they may grow strait; an absurdity thus found not to be peculiar to civilized nations. The forehead is also flattened in infancy, by boards fastened before and behind, as in their idea a wise head should resemble a full moon. They are however, in consequence of this practice, almost utterly without memory. The girls go entirely naked; while the married women wear a slight cincture: but among many other tribes complete nakedness is universal. They are painted and tattooed; do not marry within certain degrees; and the cazics alone use polygamy; but the men and women are free to quit each other. They seem to believe in one god, of a human form, who retired to heaven after making the earth; but do not venture to offer their humble adorations except during earthquakes, which they believe to proceed from the footsteps of their god, who visits the earth, in order to judge by their voices how many men exist. Hence, on the smallest earthquake, they run from their hovels, caper, and stamp on the ground, crying out "here we are, here we are." They also believe in an evil spirit, of whom the most sagacious, for the sake of emolument, have dared to declare themselves the priests, and regulate in his name amours, intrigues, health and sickness, and the little campaigns of war. They have also many charms and amulets; yet sometimes their skill in medical herbs is far from being contemptible. They also believe in another life, but imagine that thunders are the battles of that distant world, and that the milky way is a beautiful forest for their diversion. Some believe in transmigration, and suppose that the souls of their chiefs and nobles animate tigers and monkeys. The dead are disinterred after a certain period, and the bones washed and preserved; but some tribes eat the flesh, that nothing may be lost. Besides the chase and fishing, they cultivate a few herbs, particularly the yuca, with which they make the *massato*, their only drink and consolation. The water is generally bad, owing to the heat and the numerous

marshes which taint the rivers. In order to cultivate the yuca, they cut down the trees with great patience, using axes of stone; and Girval brought from Manoa one made of the stone called by the Spaniards *cha de mosca*, or fly's wing, mentioned in the description of Peru: but they have also axes of copper, the first metal used by savages, being often found native, and easily beaten into form, while iron is obdurate, and requires the skill of a more advanced society. The ground is slightly moved with a wooden spade, and the yuca being interred, the labour is finished. They also gather cotton, which serves for their little cinchures. Such are their agriculture and manufactures. Their darts and arrows are often tinged with active poison, drawn from noxious plants. So great is their confidence in its power, that they will awake the fury, and await the attack of the strongest and fiercest jaguar. They laugh when he prepares to spring: the arrow flies, and he is dead. But they never employ poisoned weapons in their conflicts, not so much from liberality of sentiment, as from the fear of a retort. Large fish are killed with arrows aimed at their heads; the small are taken in snares, or with hooks of bone. From the age of five years boys and girls manage the canoes; one stands on the prow, to guard against the shoals formed by the large trees, which oppress the rivers, while the other, at the poop, uses an oar as an helm to guide the tiny navigation. But the ruling passion is war, the business of the entire tribe, presided by the cazic or intended general. The tobacco tubes are lighted, the jars of mazato pass around; and as soon as drunkenness begins, this important subject is deliberated: the first and solemn question before the rude parliament being, "With what nation shall we go to war?" while the next is, "What shall be the cause of quarrel?" The causes generally are some petty robbery, or offence; or because the tribe has been injured by another with whom they dare not go to war, the weakest being generally chosen, as being the most convenient enemy. The expedition being resolved upon, the *moans*, or priests of the evil spirit, take charge of their chiefs, and treat them with such abstinence and artificial horrors, that at the end of some days they come forth rather dead than alive. With a more clear and rational judgment, these savages impute all success in war to the evil spirit; and carefully conceal from their deity their proceedings

TRIBES ON
THE MARA-
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TRIBES ON
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proceedings on such an occasion. Hence the *moans* are held responsible for the result of the expedition; and if it be adverse they receive a thousand maledictions, and are beaten almost to death, because their prayers to the evil spirit had not been acceptable. The petty warfares being incessant, the villages, or rather large houses before mentioned, are prepared for defence. In the form of a crescent, with the convex part towards the wood, there is one door towards some hill, and another to a plain. When the enemy attack at one door a party opposes; while the others turn the wings of the house, and attack the foe on the flanks.

Second
Voyage.

Father Girval proceeded on his second voyage in July 1791, and after encountering various obstacles, arrived at the settlement of Laguna. A small troop under Solinas had proceeded on the Marañon, with an intention to explore the river Tefi, but had been impeded by the Portuguese, and remained at St. Paul de Omaguas, which is the last station but one, on the Portuguese frontier.* After many delays Girval entered the mouth of the Ucayal, or true Marañon, on the fourth of November. Being unaccompanied by any soldier, or even white person, he was received by the savages with great cordiality, though he was afraid of encountering the Cafibos on the eastern shore, reputed the most ferocious tribe in those regions. But the chief navigators of this part of the Marañon appear to be the Conibos, who are more humane; and the sound of their rude flutes or cornets is the signal of peace or hospitality. Canoes of the Panos afterwards appeared; and the father arrived at Saraiacu with a bark and sixty canoes of friendly savages. The cazica, Anna Rosa, conducted the procession to a little convent, which she had founded, and the Indians obeyed her orders with great punctuality. No sooner had Girval arrived at Manoa, than he began, in consequence of the orders of the viceroy, to inquire for the beautiful bird called the Caruncle already mentioned, and found that it was known to the Piro tribe, who inhabit the Ucayal, or genuine Marañon, in the latitude of Tarma, being about twenty days navigation from Saraiacu on the Manoa. He found abundance of cinnamon trees, and began to instruct the savages

* *Estad.*, xxi. 201.

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in its cultivation, hoping that this precious spice would soon become an essential article of commerce. The natives were pleased with the return of their countrymen from the expedition to Tefi; and the father entertained strong hopes of their conversion, having also won their confidence by the iron tools which he presented to them. In his letter from Saraiacu, he demands an ample supply of hardware; and among other articles some wine, for the new discovered pips, called *pucheri*, were found, when steeped in wine, an effectual remedy for the bloody flux.* The settlement was thought of the more importance, as it prevented the Portuguese ships from pursuing their excursions on the Maranon; and with the fort on the Mayro, inclosed the Pampas del Sacramento on both sides, so as to render it a decided Spanish province.

From a second letter of the missionaries, dated at Manoa the third of April 1792, it appears that the desired route had been discovered, to pass directly from Manoa to Cumbaza on the Gualaga; and saved 300 leagues of navigation from the Chipurana, by the Gualaga, the Tunguragua, and the Maranon. The cazic, with ten men and two women, descending the Maranon about five leagues, and reaching the outlet of an unknown lake, now called that of St. Catherine, arrived by this stream at a *quebrada*, or break in the mountains, followed by a beautiful plain, where dragging the canoes across, in the course of one day they arrived at the river Chipurana. Sailing down this river they soon entered the Gualaga, and happily arrived at Taropoto, after a journey of fifteen days. By the same route, the twenty frontier militia† have passed from Cumbaza to Manoa in twelve days; and a road might easily be opened from the lake of St. Catherine to the river Chipurana‡ The imposition of tribute on the Indians of Taropoto and Cumbaza was the most absurd of all oppressions, as they rather wanted assistance; but in the Spanish colonies, and perhaps in some other countries, the pay-

* In the original *cursos de sangre*, perhaps bleeding wound, for the bloody flux is usually called *fluxus de sanguine*.

† The frontier militia are native Indians.

‡ The gross deficiencies of La Cruz's map become more and more apparent, and it is to be regretted, that the map of Sobreviela has not been copied, if published, as would seem, in the *Mercurio Peruano*.

SECOND
VOYAGE.

ment of tribute is considered as the only infallible mark of conversion to christianity, as it is the constant lot of christians to suffer in this world.

The Panos and Conibos, and even the Chipeos, who had murdered the first missionaries, began to shew some dispositions to embrace the faith. Some Piros were expected from the neighbourhood of the Mantaro, and the frontiers of Guanta and Jauja, passing in their canoes on the Marañon: but the Casibos near the Mayro, and on the banks of the delightful Pachitea, a ferocious race, were scarcely expected to become amicable, having no intercourse with any other nation, and never leaving their own country, as they have no utensils to make canoes. They surprize and kill any strangers they find within their boundaries; and having cooked them with great care, eat them with great comfort, so that a traveller rarely returns to publish any account of foreign parts. These savages form the only obstacle to impede the navigation from Manoa to Mayro; but a few regular troops would easily extirpate these irreclaimable tigers. The courage and zeal of the missionaries cannot be sufficiently praised, especially after the fate of the former; and the voluntary offer of their lives commands respect for their principles. Occupied in teaching these savages the arts of life, and of innocent sustenance, whatever a protestant may think of their religion, he cannot withhold the applause due to their fortitude and beneficence.

In 1794 father Girval, by orders of the viceroy, navigated the Marañon to its confluence with the Pachitea; and that majestic river remains to be explored as far as its passage through the mountains, not far to the W. of Cuzco. These details concerning the territory newly explored by the Spanish missionaries, though somewhat prolix, will require no apology, as they serve greatly to elucidate the geography of the Native Tribes and Unconquered Countries, and open vast and new views concerning this portion of the world.

*General View of the Maranon and its confluent Streams,
from the Discoveries 1790—1800.*

AMONG the grand rivers which water the globe, and diffuse fertility MARANON. and commerce along their shores, the Maranon will ever maintain the preference. Condamine had already computed its navigation at a thousand maritime leagues, or three thousand miles; to which, from the recent discoveries, may be added at least four or five hundred leagues; so that, if the countries were possessed by industrious and populous nations, a ship of four or five hundred tons might ascend this wonderful river to the extent of four thousand five hundred miles of navigation! A frigate of some force might awaken with its artillery the echoes of the stupendous Andes! *

Computed in a general geographical view, as the course of the Maranon, for more than one-third of its progress, is from S. to N. it considerably exceeds the whole breadth of South America: but taken on the same scale with the other rivers, that is in a line nearly direct, the length on a map will be found to be about two thousand five hundred g. miles. The Kian of China, estimated in the same manner, has been found to reach two thousand miles; and the Ob of Siberia nineteen hundred. The Missouri of North America may probably attain two thousand miles. The pre-eminence of the Maranon, far from being lost, is greatly increased by the recent discoveries. This prodigious river, this torrent-sea, is not only superior in the length, but in the breadth and depth of its majestic course; and receives on all sides, as tributaries, rivers of such power that any one would enrich the deserts of Africa, and might spread fertility, trade, and civilization throughout a wide empire. It has been seen that where the Beni joins the Maranon it is half a league in breadth:† the Tunguragua from the W. the Llavari or Ma-

* In the Spanish marine nomenclature, a *galon* seems to be from seven hundred tons upwards; while a *merchant frigate* is from three hundred to six hundred tons.

† The Spanish league is four B. miles.

MARANON. dera from the S. the Negro from the N. are all rivers of this surprising description. In short, through more than one half of the great continent of South America, almost every advantage of a maritime shore might be diffused by the Maranon, and its confluent streams.

The recent discoveries having been buried in the Spanish language, and in voluminous works of very difficult acquisition, it is no wonder that they have escaped even an enlightened age. But as they lead to new ideas concerning the wonderful diversity and majesty of the works of nature, they deserve great attention; while, at the same time, they throw a new and important light on the science of geography. The discovery of the sources of the Missouri, and of the Nile, the complete course of the Niger, have been esteemed objects of supreme importance: and when the course of the mighty river Burrampooter, and its grand confluence with the Ganges, were disclosed by an excellent modern geographer, no small admiration was excited.* But even these objects greatly diminish when compared with the sublimity of the Maranon.

The discussion concerning the sources of the Maranon, and the removal of the ridiculous distortions of the jesuits, were indispensable in the general view of the rivers of South America; the first object of science being to dispel error: and the preceding details concerning the country and tribes on the Maranon, necessarily accompanied the relation of the recent discoveries, as the reader might thereby perceive that they are not theoretic nor imaginary, but founded on actual enterprise. But an abstract of the whole may be satisfactory to the reader, and useful to the geographer, especially as the original writers have scarcely observed any arrangement.

1. The **MARANON**. Near its source this river is called the Apurimac, which rises to the S. of the mineral mountains of Cailloma, perhaps in the lake of Vilque, as laid down by La Cruz, S. lat. 16 10; but probably still more to the S. perhaps even 17°, for after being joined by the Monigote, in Cailloma, it is so deep, when it enters the province of

* The confluence, and a part of the course of the Burrampooter, had already been presented in a map by Valentyn, whose work contains many other excellent maps little known to geographers.

Canes and Canches, that a bridge is already necessary.* On the W. of MARANON. Cuzeo it is a powerful river.

The chief rivers which join the Marañon are as follow :

2. The river of Pampas or Charcas, from the W. at $13^{\circ} 10'$.
 3. The Vilcamayo, a great river nearly equal to the Apurimac or Marañon, at $12^{\circ} 15'$. The Vilcamayo, like the others, has several names, according to the provinces it passes, as the river of Quillabamba, Uru-bamba, &c. a circumstance which has often proved a great impediment to geographical knowledge.

4. The Mantaro, or River of Jauja, so called from the province it pervades, joins the Marañon at $12^{\circ} 6'$ and seems to propel the chief river towards the N. E. the course having formerly been towards the N. W. The Mantaro has been ridiculously called the Ancient Marañon by La Cruz.

5. The great river Paucartambo, far from joining the Vilcamayo, as laid down by La Cruz, joins the Marañon at $10^{\circ} 45'$; being in fact the river styled by La Cruz Ynambari, a name which Bueno had learned from some savage tribe on its banks. The Perene has already joined the Marañon on the opposite side, or W. at $11^{\circ} 18'$. The Perene rises about two leagues from Tarma, runs through that town, and receives many streams from the heights of Bombom and Pasco. From the confluence of the Perene to that with the beautiful river Pachitea, at $8^{\circ} 26'$, that is a space of $2^{\circ} 52'$, or one hundred and seventy-two g. miles, though by numerous windings probably increased to five hundred, the Marañon receives no less than forty copious rivers; but above all two of prodigious power, the Paucartambo above mentioned, and the Beni.

6. Three leagues beneath the junction of the Paucartambo, the Marañon is joined by a river, about two B. miles, or half a Spanish league in breadth, of such power and force, that the course of the Marañon is changed for a space, and bent towards the chain of the Andes. But such is the amazing grandeur of these streams, that this river of two miles in breadth, is only a branch of the grand river Beni, which, at 13° , has sent off another large branch into the lake of Rogagado; whence issuing in three powerful streams, the Yutay, the Tefi, and the

* For other details, see p. 511.

MARANON. Coari, the Beni pays a second prodigious tribute to the Marañon! Nature defies all the theories of man; and it would be difficult to pronounce whether the Beni or the Apurimac be the principal stream, a question at present discussed by Spanish geographers, while the Tunguragua or jesuitic Marañon is entirely set aside. The reader will reflect, that from the watery eruptions of the volcanos, and other circumstances, it may be judged, that there are vast subterranean lakes and rivers under the stupendous table land of the Andes, whence the subterranean noises and winds, and other phenomena already described. The size and power of the rivers, even near their sources, do not therefore, in this view, excite much surprise. The source of the Beni, near Sicafica, is about $2^{\circ} 30'$ further to the S. than that of the Apurimac, but as its course is far more direct, the actual length of the navigation bears no comparison with that of the Marañon, which at this junction acquires the name of the Grand Para. The navigation of the Beni might conduct the adventurer to the mines of Potosí; and that of the Apurimac to Cuzco and Lima.

7. At $8^{\circ} 26'$, the Pachitea joins the Marañon. The Pachitea is esteemed the most beautiful of all these tributary streams. It rises in $10^{\circ} 46'$, first running E. then N. and in the early part of its progress is called the Pozuzu, especially at its confluence with the Mayro, where it forms a noted haven, whence there is an open navigation to the Marañon. The next remarkable stream that joins the Pachitea is the Piachiz. The course of the Marañon here varies from due N. to N. E. and the map of La Cruz must be erroneous in the great westerly inflection of its course, thereby approaching the Gualaga too nearly by one half.

8. The Aguaytia also joins the Marañon from the W. at $7^{\circ} 35'$; the Manoa or Cuxniabatay at 7° ; the Saraiacu at $6^{\circ} 45'$; the Tapichi or Canopocati, opposite to San Regis at 5° . This last river seems also to communicate with the Tunguragua.

9. The Tunguragua, Lauricocha, or jesuitic Marañon, falls into the Marañon at $4^{\circ} 45'$; where the latter is divided into three branches, the chief of which is not less than fifty-five fathoms in depth. The course

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of the Maranon now turns to the east and has been sufficiently explored.*

It has been seen that the navigation of the Maranon had, by the last account of the missionaries, been only explored as far as the confluence of the Pachitea; but it may well be supposed that it has now been explored to its utmost stretch, and it is to be hoped that the new map of South America, about to be published at Madrid, by Bauza, will diffuse a steady light over these new and important discoveries. †

ISLANDS BELONGING TO SOUTH AMERICA.

THESE shall be traced from the west towards the east. The desert isles of Galapagos have already been mentioned in the account of Polynesia, or the islands in the Pacific; and that of St. Felix is of no consequence.

Alcedo informs us that the Galapagos have also been called the Enchanted Islands; the largest being Mascarin and Tabaco. They are all in a desert, though in a delicious and fertile climate. The largest may be ten Spanish leagues or forty B. miles in length, and six leagues in breadth. There are many channels capable of receiving large vessels.

The venerable navigator Dampier, the Cook of a former period, has given the following description. ‡

* By far the most important river which joins the Tunguragua is the Gualaga, whose junction is placed by the missionaries at three hundred miles to the W. of the confluence of the Maranon and Tunguragua, but the navigation winds considerably. The Gualaga is also called the river of Guanuco, as it runs near that city, with which it might open a direct trade to the Atlantic. It has already been seen that when the Gualaga joins the Tunguragua, it is four hundred and fifty yards wide, and thirty-four in depth.

This river rises in 10° 57' S. lat. from the lake Chiquiacoba in the plains of Bombon, and runs N. to the city of Leon de Guanuco, 10° 3', when passing to the S. of the city it runs E. but soon resumes its former direction. The navigation is impeded by terrible rapids and sand banks, till the confluence of the river Monzon S. lat. 9° 22'.

† Father Sobreviela compiled a map of the missions, and discoveries. The editors of the *Mercurio Peruano* say, that, being assisted by liberal subscriptions, they intended to publish this interesting map, so essential to the geography of South America. It has not yet reached England.

‡ Voyage round the world, vol. i. p. 100. ed. 1729. 4 vols 8vo.

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Galapagos. "The Galapagos are a great number of uninhabited islands, lying under, and on both sides of the equator. The eastermost of them are about 110 leagues from the main. They are laid down in the longitude of 181, reaching to the westward as far as 176, therefore their longitude from England westward is about 68 degrees. But I believe our hydrographers do not place them far enough to the westward. The Spaniards who first discovered them, and in whose draughts alone they are laid down, report them to be a great number stretching north-west from the line, as far as five degrees N. but we saw not above fourteen or fifteen. They are some of them seven or eight leagues long, and three or four broad. They are of a good height, most of them flat and even on the top; four or five of the eastermost are rocky, barren and hilly, producing neither tree, herb, nor grass, except some shrubs on the shore.

"There is water on these barren islands, in ponds and holes among the rocks. Some other of these islands are mostly plain and low, and the land more fertile, producing trees of divers sorts, unknown to us. Some of the westermost of these islands are nine or ten leagues long, and six or seven broad; the mould deep and black. These produce trees of great and tall bodies, especially mammee-trees, which grow here in great groves. In these large islands there are some pretty big rivers; and in many of the other lesser islands, there are brooks of good water. The Spaniards when they first discovered these islands, found multitudes of guanoes, and land-turtle or tortoise, and named them the Galapagos Islands. . . . I do believe there is no place in the world that is so plentifully stored with those animals. One of the largest of these creatures will weigh a hundred and fifty, or two hundred weight; and some of them are two feet, or two feet six inches over the *challapee* or belly. I did never see any but at this place, that will weigh above thirty pounds weight."—It is surprizing that the conquest of the Galapagos has not been suggested by the court of aldermen.

Juan Fernandez.

The isle of Juan Fernandez, so called from the first discoverer, is only about four leagues in length, with an anchoring place on the northern coast, which is diversified with many beautiful kinds of trees. The southern part is precipitous and barren; but there are some hills of a red earth approaching to vermilion. Many antiscorbutic plants

are

are found on Juan Fernandez, which is celebrated in the voyage of JUAN FER-
NANDEZ. Anson.

There are two remarkable archipelagos towards the southern extremity of this continent. That styled the gulf of Chonos, or the archipelago of Guaytecas; and that called the gulf of the Holy Trinity, or the archipelago of Toledo. The most remarkable isle in the former is that of Chiloe, about 140 B. miles in length by 30 in breadth, but almost divided in the middle by bays or creeks. The chief harbour is Chacao on the N. and at Calbuco there is a corregidor, nominated by the president of Chili: there are also two monasteries and a church.* The isle of Chiloe is said to be well peopled with Spaniards, mulattoes, and converted savages.

Lequanda, in his account of the commerce of Peru, has observed, that from the middle of the eighteenth century, many ships from that country have visited the isle of Chiloe† The port of San Carlos, S. lat. $41^{\circ} 50'$, long. $303^{\circ} 57'$ from the meridian of Teneriffe, is capable of receiving considerable vessels; and the articles of commerce which the country supplies, with the little industry of the islanders, have led to a trade of some benefit. The natives are robust, and of good dispositions, but their industry might be improved. There are forests of excellent timber, particularly a kind of cedar, supplying boards for architecture. Chiloe also abounds in swine; and the hams are exquisite, the pigs feeding on shell fish, which abounds on the shores. The fishery is abundant, and might support a far greater number of inhabitants. Some wheat is grown, the land being sufficiently fertile; but the rigid climate, and shortness of the summer, often prevent its attaining full maturity. The deficiency is supplied with *papas*, a kind of potatoes, and with barley and beans, of which they make flour. Cattle and sheep from Spain abound in the isle; and the meat is remarkably savoury. There are numerous tame and wild birds; and among the amphibious animals the kind of seal, called the sea wolf is abundant. The Indians of the little islands adjacent, which are called Chonos, use their flesh salted as common food. There is also an animal, probably the sea otter, common

* Ulloa, ii. 264.

† Estella, xx. 302.

CHILOE.

from Chiloe to Valdivia, whose fur is esteemed equal to the beaver of Canada, and might be a profitable article of commerce: and a bird called the American swan, whose skin, covered with exquisite snowy down, is used as a delicate fur. The women execute rude manufactures of ponches, or Indian mantles, and other coarse woollen articles. Some few coarse linens are also woven, but both articles are not sufficient to clothe the inhabitants, estimated at twenty five thousand, exclusive of the Chonos. They begin to import woollens and cottons from Peru; but few Spanish articles are consumed, owing to the want of civilization. During five years, the imports from Chiloe at Lima, in boards, ponches, hams, and salt fish, amounted to more than two hundred and eighty thousand dollars. The exports from Lima to Chiloe exceeded three hundred and thirty-four thousand; but a part went to the support of the garrison.

To the S. of Chiloe and the archipelago of Chonos, is the peninsula of the Three Mountains, followed by three considerable islands, that of Campana, lat. 48° to $49^{\circ} 20'$, explored by Malspina; that of Madre de Dios; and that of St. Francis by some called Roca-Partida. The rigour of the climate renders these islands of little importance.

In the second archipelago, which approaches the antarctic frosts, is the island of St. Martin, in which there seem to be some Spanish settlements or factories: and not far to the S. begins that broken series of wintry islands, called the Terra del Fuego, from two or more volcanoes, which vomit flames amidst the dreary wastes of ice.

Terra del Fuego.

In the map of La Cruz the Terra del Fuego is divided by narrow straits into eleven islands of considerable size. In their zeal for natural history, Sir Joseph Banks and Dr. Solander had nearly perished amidst the snows of this horrible land; but they found a considerable variety of plants. The natives are of a middle stature, with broad flat faces, high cheeks, and flat noses, and they are clothed in the skins of seals. The villages consist of miserable huts in the form of a sugar loaf: and the only food seems to be shell fish. This dreary region is not however so completely oppressed by winter, as has by some been imagined, the vales being often verdant, and enlivened with brooks, while a few trees adorn the sides of the hills.

The

In the year 1765 a large merchant vessel, richly laden, and destined for Lima, was wrecked on the shore of this island, but the mariners reached the land. Taking possession of a hill near the coast, they fortified it with some cannon from the ship, living on such provisions as were saved. In a short time a troop of the natives completely naked approached, all rubbing their bellies with their hands. A cannon being fired they fell on their faces; but getting up began again to rub their bellies, which embarrassed the Spaniards, as they could not discover whether it were a sign of peace or war: and, being allured with friendly gestures, they approached, but still continued this ridiculous practice; whence the Spaniards called them *Rascabarrigas*, or Belly-rubbers, a name, which like other absurd terms, may perhaps continue.* They afterwards became friendly, but would accept nothing except glass-beads. L'Heremite on his voyage round the world in 1623,† found these savages cruel, as they killed seventeen of his men, and devoured two before his eyes.

The isle called Statenland is divided from the Terra del Fuego by the strait of Le Maire. Here also Captain Cook observed wood and verdure. So much more severe is the cold in the antarctic region, that these countries only in lat. 55°, or that of the north of England, are more frozen than Lapland, in lat. 70°.

To the N. E. are the islands called Falkland by the English, but by the French Malouins, by the Spaniards Maluinas, from the people of St. Maloes whom they esteem the first discoverers.‡ In 1763 the French having lost Canada, turned their attention towards these islands, as an American settlement in another quarter; and the account of Bougainville's voyage for that purpose, published by Pernetty, contains ample

TERRA DEL
FUEGO.

Falkland Isles
or Malouins.

* Dobriz. i. 171.

† This is the fourth or fifth Dutch voyage round the world. That of De Noordt being in 1598—1601. Drake and Cavendish long preceded the Dutch; and were the immediate successors of Magalhaens.

‡ The name of Falkland is said to have been given by Captain Strahan in 1639, probably in honour of Viscount Falkland. From Pernetty's account, p. 226, there is little herbage except on the N. E. and E. the southern antarctic winds being extremely cold. The rocks are of quartz, with some pyrites and marks of copper. Grey and reddish slate is common, with red and yellow ochres.

FALKLAND
ISLES.

details concerning these islands. There are two of considerable size, each about 40 miles square. The soil and climate do not appear to be laudable, but there is a considerable variety of fowls and fish; and the plants seem somewhat to resemble those of Canada. The walrus, and other animals of the seal kind, frequent the shores. In 1764 Commodore Byron was sent to take possession of these islands, which were undoubtedly first discovered by the English; and a little establishment was made at a place called Port Egmont, but being found of little or no value they were in a few years ceded to Spain. The soil is marshy, and even in summer there are perpetual storms; and the Spaniards seem only to retain a small factory on the north.

The Maluinas or Falkland Islands, which occasioned some ridiculous disputes, are found to be uninhabitable even by savages; one of those numerous evidences which evince the necessity of the study of geography among statesmen. There are only reeds and moss, with perpetual fogs, and furious tempests from the Antarctic pole. The extreme cold cannot be relieved by fire, as there is no material; and even a ship in the port is covered with perpetual snow. The penguins, called swans by the Spaniards, supply a scanty and miserable food.* A contest for Terra del Fuego would have been equally prudent; while the beautiful country of Chili, so completely fortified by nature, was utterly forgotten or rather unknown!

Georgia.

In this department may also be arranged, an island of considerable size to the S. E. of the Falkland islands, discovered by La Roche in 1675, and afterwards named Georgia by Captain Cook, who explored it with some attention in 1775. It may be called a land of ice, presenting rocks and mountains of that substance, while the vales, destitute of trees or shrubs, are clothed with eternal snow; the only vegetables being a coarse species of grass, burnets, and lichens. The rocks are of blackish horizontal slate, perhaps approaching to hornblend. The lark, a hardy and universal bird, appears here as well as at Hudson's Bay, and there are numbers of large penguins and seals. Still further to the S. E. are, if possible, more dreary lands, more properly styled the

SOUTH AMERICA.

803

Southern Thule, than the Sandwich islands, a name already bestowed on GEORGIA.
a very different country. These islands may be styled the southern
throne of winter, being a mass of black rocks covered with ice and
snow.

Among the few islands to the east of South America may be mentioned
that of Ascension or Trinidad, and that of Ferdinando Noronha;
that of Saremburg may also be regarded as an American isle, while
Tristan da Cunha rather belongs to Africa.

5 K 2

AFRICA.

Southern

AFRICA.

*Extent.—Original Inhabitants.—Progressive Geography.—Religion.—Climate.
—Rivers.—Mountains.—Deserts.*

Extent.

THIS continent is, after Asia and America, the third in size ; but in political and ethical estimation is the last and meanest of the four great divisions of the earth. From the southern extremity to the Mediterranean are about seventy degrees of latitude, or 4200 g. miles. The breadth, from 18° west to 51° east, may be assumed on the equator at 4140 g. miles. The name is supposed to have spread by degrees from a small province, in the north, over the rest of the continent.*

Original
Population.

In the central parts on the south the population appears to be indigenous and peculiar, these being the native regions of the negroes, whose colour, features, and hair, distinguish them from all the other races of mankind. In the northern parts there have been many successions of inhabitants, the Egyptians being probably from Hindostan, and the Abyssinians being of Arabian extract ; while further to the west the Carthaginians passed from Syria : and according to Sallust, who refers to Punic manuscripts, other maritime parts were peopled by the Medes, Persians, and Armenians. Yet his derivations seem rather fanciful ; and there is little certainty except with regard to the Carthaginians. The original inhabitants of the northern parts appear to have been, in all ages, radically distinct from the negro race, from whom they were divided by the great desert of Zaara ; and in the eastern parts the latter were yet further repelled,

* The western coast of Africa had been generally placed three or four degrees too much to the east, that is too far from America.

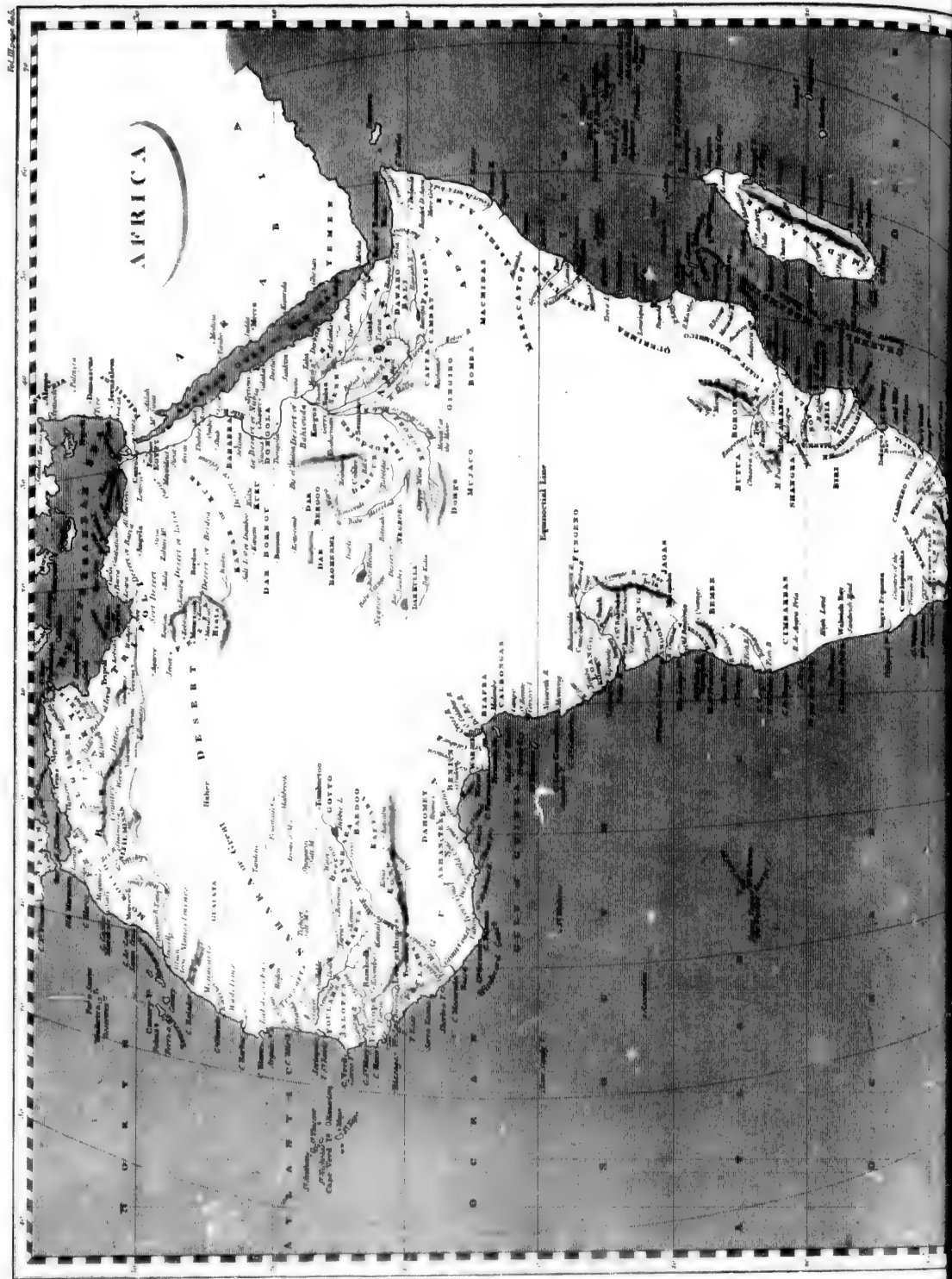
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by the Arabian colony which settled in Abyssinia.* These northern inhabitants sent considerable colonies into Spain; and from the Roman historians it appears that they had made some little progress in the arts of life. Even Herodotus is no stranger to these two distinct races of mankind.

ORIGINAL
POPULA-
TION.

The Romans appear to have explored the north of Africa as far as the river Nigir; and they established flourishing colonies in many parts. Upon the fall of their empire the Vandals of Spain passed into Africa, A. D. 429, and established a kingdom which lasted till A. D. 535. In the following century the Mahometan Arabs subdued the north of Africa; and under the name of Moors constitute a great part of the present population. There have been recently discovered in the interior some nations or tribes of a copper colour, with lank hair; but the geography of this country is too imperfect to admit of a precise illustration of these topics.

The progressive geography of this continent might supply materials for a long and interesting dissertation. Herodotus, whose African geography has been amply illustrated by Rennell, was no stranger to the northern parts, from Mount Atlas in the west to the Ethiopians above Egypt; and specially mentions the great central river or Nigir, as running towards the east. Concerning the voyage of Hanno the Carthaginian the learned have not agreed; and far less concerning the voyage said to have been performed by the orders of Necho king of Egypt. Suffice it here to observe, that Rennell supposes the ancient knowledge of the African shores to have extended to Sherboro Sound, to the south of Sierra Leone; while M. Gossellin restricts that knowledge to the cape and river of Nun, which he supposes to be the Nia of Ptolemy. Of the two opinions, that of Rennell has certainly a greater claim to probability; but perhaps the truth may be in the middle, and the knowledge of Ptolemy probably expired at Cape Blanco. D'Anville supposes

Progressive
Geography.

* Other ancient Arabian colonies seem to have penetrated far to the south, and are traced in Madagascar and the opposite shores. The name *Kaffirs* or *Unbelievers*, is vague, and ought to be discontinued.

The actual population of Africa cannot exceed thirty millions; or perhaps even twenty.

¹ *Recherches sur la Geographie des Anciens*. Paris 1798; 4to. These two volumes only relate to the geography of Africa.

that

PROGRES-
SIVE GEO-
GRAPHY.

that the mountains called the Chariot of the Gods were those of Sierra Leone; thus coinciding with Rennell.*

On the eastern shores the knowledge of the ancients does not appear to have extended beyond the isle of Pemba, S. lat. 5°, or the vicinity. But of the interior parts Ptolemy, who resided in Egypt, appears to have had more precise knowledge in the second century, than has since been attained in any age. One of the most striking defects in the maps adapted to his work by Agathodemon is, that sufficient spaces are not left for the wide forests and deserts. Hence in Germany, Persia, Arabia, and other instances it has already been shewn that distant positions are often crowded together. In the map of Africa the same deficiency is apparent, the proper space not being left for the great desert of Zaara. Hence the source of the Nigir, lat. 11°, is elevated to lat. 18°, and its course approaches the Land of Dates. On the other hand the southern parts of Ptolemy's map are too much expanded, and filled with numerous names of small tribes, like La Cruz's map of South America. The most remarkable feature, in the description of the Egyptian geographer, is the river Gir, which he delineates as equal in length to the Nigir; but running from east to west, till it be lost in the same lake, marsh, or desert, as the Nigir. This name of Gir or Ghir is certainly just and native, as there is another river of the same name in the country of Taflet or Sijilmessa: and it is not a little surprising that Rennell, in his theory

* From Gosselin's *Recherches*, i. 129, it may be inferred that in Ptolemy's maps the rivers Subos, Salathos, and Chufarios, are repetitions of Subur, Sala, and Cufa, and the town Salathos of Sala. This seems incontrovertible; but there do not appear to be any other repetitions. The projection of Arsinarium, and its position with respect to the Canaries, indicate Cape Bojador. The three rivers that follow seem to be that del Ooro, St. Cyprian, and some smaller stream; and it is possible that the White (by some called Black) mountains are the Chariot of the Gods, while the ancients did not pass the bold promontory of Cape Blanco, within which the sea makes a recess, as expressed by Ptolemy. Supposing Atlas Major to be near Cape Geer, where that great range really terminates, it will embrace about one third of the ancient knowledge, (Ptolemy's map) which could not thus extend beyond Cape Blanco.

The ancient nautical observations of mountains, &c. were not restricted, as in modern times, to the mere coasts, but embraced lofty inland mountains, and other striking objects within view. The sailing Directions for the coast of Africa, 1799, mention, p. 15, a remarkable peak to the south of Cape Bojador; and the prodigious roaring of the sea, produced by the shooting of the streams against each other, and which begins (ib. p. 16,) not far to the north of Cape Blanco, may well have terrified the ancients from any further progress. Nay the doubling of Cape Bojador,

theory of these regions, should have totally omitted this striking feature. The Arabian geographer Edrisi, who wrote in the twelfth century, seems to indicate the Gir only, when he speaks of the Nile of the Negroes, as running to the west, and lost in an inland sea, in which was the isle Ulil. The river Bahr Kulla of Browne appears to be the Gir of Ptolemy. A further consideration of this curious subject is reserved for the last section of this brief description, in which the discoveries and conjectures concerning the central parts are recapitulated. Suffice it here to observe, that as the ancient discovery of the river Nigir was made by land from the north, and not from the west, it cannot be considered as affecting the question concerning their knowledge of the western shores.

It is remarkable that Ptolemy's description of these shores extends little beyond the Fortunate or Canary islands, though it may have been expected, that as one of these islands was assumed as the first meridian, their position should have been pretty accurately determined. The ancient knowledge of the opposite shores might be best illustrated by views of the head lands and mountains, visible from the sea, so as to judge of the appearances which give name to the Chariot of the Gods, probably a mountain between two smaller, like wheels, or some other fancied resemblance.

From the curious map of the coast of Africa, published in the Voyage of La Crenne, Borda, and Pingré, 1775, 4to. it appears that the Seven Mountains or rather hills, *Mottes*, are to the S. of Cape Mirik, and about two degrees or a hundred and twenty g. miles of linear distance to the S. E. of Cape Blanco, requiring perhaps, on account of the shoals, which must also have impeded the progress of the ancients who commonly

Chariot of
the Gods.

dor itself was long an object of terror to the Portuguese. Upon the whole there seems reason to conclude, with some certainty, that Cape Blanco was the utmost limit of ancient knowledge in this quarter; but the face of the coast has been greatly changed, even in modern times, by the force of the currents, and the accumulation of sand, and even isles seem to have been swallowed up, or greatly diminished, as has happened on the western coast of Germany.

It may also be observed that to the south of Cape Blanco there is a great sand bank which is very dangerous; and as the ancients did not know the isle of Arguin, to the south of Cape Blanco, though they kept near the shore, it may be regarded as an additional proof that they did not sail further to the south.

failed

PROGRES-
SIVE GEO-
GRAPHY.

failed within sight of land, about sixty leagues of navigation. In the first edition the author was misled by what are styled the most accurate maps of Africa, when he supposed that these hills might be the Chariot of the Gods. As the chariots of the ancients were round, (see the Egyptian and Greek monuments,) it is evident that the mountain called the Chariot of the Gods must have been in that form. Now it is remarkable that to the E. of Cape Blanco, and certainly visible from that promontory, or by sailing a small distance beyond, there is the *Montagne Ronde* in the map of La Crenne, the Round Hill of the African Pilot, evidently a striking object which has alike impressed ancient and modern navigators, and corresponding precisely with the author's idea concerning the extent of ancient knowledge, for Ptolemy places the Chariot of the Gods considerably to the east of what he calls a *recess of the ocean* corresponding with the bay of Arguin. It is truly singular that the striking features of the shore given in the French map 1775, and the African Pilot 1801, should have escaped the late constructors of large maps of Africa. The Black Mountains are not far to the E. of Cape Blanco. As the maps above mentioned are both from original surveys they deserve complete confidence.

If the ancients had discovered Cape Verd, it is probable that the islands called by the same name could not have escaped their knowledge; yet no geographical enquirer has been led to infer that their geography extended so far; nor do the Arabs appear to have made any discoveries in this quarter. On the contrary, even the memory of the Fortunate Islands appears to have been lost, when the Normans of France, a people who inherited from their ancestors the Norwegians, a singular disposition for maritime enterprise, again discovered them in the fourteenth century; and in 1402 they were conquered by Bethencourt.* This achievement appears to have acted as the first impulse towards any efforts in that quarter. In 1412 John I. king of Portugal, resolving to retaliate the attacks of the Moors, fitted out a fleet to assail the coasts of Barbary: and a few vessels were dispatched to explore the southern part of that country, as an attack from behind, or in an unguarded

* Histoire de la premiere decouverte et conquete des Canaries. Paris, 1630, 8vo.

quarter, might reasonably promise more decisive success. Cape Nun had before been the utmost limit of Portuguese adventure, which was now extended to Cape Bojador. Prince Henry, the fourth son of king John, being fortunately a lover of science, fitted out ships to prosecute the discovery; and in 1419 Madeira was disclosed,* and its fertility and exquisite climate soon invited a small colony.

Yet so slow was the progress of discovery in Africa, that Cape Bojador † was first passed in 1433: † but the impulse having become vigorous, the discoveries were now more rapid; and in the space of a few years all the coast from Cape Blanco to Cape Verd, with the river of Senegal, was unveiled by the Portuguese, assisted by Italian navigators. So important did these discoveries now appear, that pope Eugene IV. granted a bull of possession to the Portuguese, of all the countries which they should discover, from Cape Nun to India. The islands of Cape Verd were discovered in 1446; † and the Azores, which from their relative position strictly belong to Europe, were all known before 1449. Yet in 1463, when prince Henry died, not above 1500 miles of the coast of Africa had been visited; and the equator was not passed till 1471. But the discovery of the gulf of Guinea, which in the ancient ideas might have been expected to terminate the continent; and of the still further southern protrusion of the African shore; were far from being inconsiderable achievements.

The protection of John II. king of Portugal led to still further discoveries. Congo arose to notice in 1484; and the stars of another hemisphere began for the first time to appear to astonished Europeans.

* Bergeron, p. 36. says that Madeira had been already discovered by the English, 1344.

† This word in the Portuguese signifies a *doubling shore*: in the Spanish *bojar* is to compass or go around. Currents render this whole coast extremely dangerous; and the safest navigation is on the W. of the Canaries. The ancients displayed no small courage in passing Cape Bojador, long an object of terror to the Portuguese.

† Robertson's America, i. 59. The Commander was Gilianez. Barros, Dec. 1. fol. 10. Italian translation by Ullon, Venice, 1562, 4to.

† Robertson, ib. Barros is not precise in dates; but says, fol. 32, that the isles of Cape Verd were discovered by Antonio di Nolle of Genoa. He is the Antonietus Ligur of Cadamosto, who was present; and whose first voyage was thus 1445, the second 1446; not 1455 and 1456, as corruptly dated in the Italian edition, Vicenza 1507, 4to. In one passage Cadamosto says that Madeira was discovered in 1418; and in another that this discovery took place twenty-seven years before his voyage; that is the latter was in 1445.

PROGRESS-
FIVE GEO-
GRAPHY.

Hopes were soon entertained of a maritime passage to India; and an embassy was dispatched to Abyssinia to secure the friendship of the monarch, in case the circumnavigation should be completed. At length, in 1486, the conduct of a voyage for this purpose, the most arduous at that time attempted in modern history, was committed to Bartholomew Diaz, who discovered near a thousand miles of new country; and at length descended that great promontory, the utmost southern limit of Africa. But such was the violence of the tempests, that Diaz found his fleet unable to navigate unknown seas, where the chance of resitment was uncertain: and, after a voyage of sixteen months, this great navigator was constrained to return, having named the utmost promontory *Cabo Tormentoso*, or the Cape of Tempests; but king John, as a better omen, assigned the received appellation of the Cape of Good Hope.

Intelligence from Abyssinia having confirmed the possibility of a passage and trade with India, another expedition was instituted, which was further stimulated by the grand discoveries of Colon in 1492; and the success of Vasco de Gama, who, on the 20th November 1497, passed the Cape of Good Hope, and explored the eastern coasts of Africa as far as Melinda in Zanguebar, whence he passed to India and arrived at Calicut 22d May 1498, is recorded as the most distinguished period in African geography.

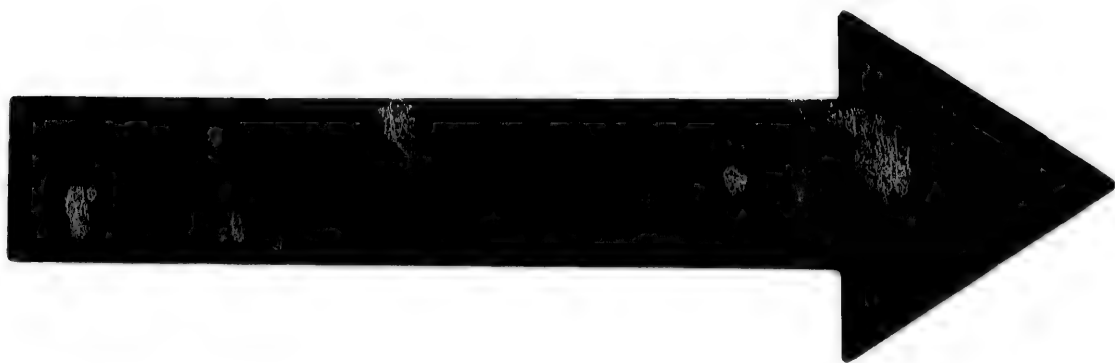
But that of the interior was destined to remain in obscurity, though, early in the sixteenth century, Leo gave an ample description of the northern parts; and Alvarez who visited Abyssinia in 1520, published a minute account of that country;* which was further illustrated by those of Lobo and Tellez. The Portuguese established several factories and settlements in the west, in order to secure the trade in gold and ivory: and the additional title of king of Guinea had been assumed by

* One of the best translations of Leo is that in English by Pory, at the request of Hakluyt, with a map and additions prefixed, containing all the knowledge acquired at that time: London, 1600, folio. The work of Alvarez was translated from Portuguese into Spanish. Antwerp, 1557, 12mo, pp. 414.

In 1588 Livio Saruto published a geography of Africa in folio at Venice; and in 1600 Dapper gave another at Amsterdam, which was copied in Ogilby's folio, London, 1671. Murmol's noted work was written in Spanish, and the first volume appeared at Granada 1573, folio. But Leo remained the chief original authority. The Congo of Lopez was published at Rome 1591, 4to: and a Latin translation 1598. The Decads of Barros began to appear 1560.

the Portuguese monarchs. The accounts of the missionaries gradually enlarged the knowledge of African geography. Yet from peculiar circumstances that knowledge continues extremely limited: the vast sandy deserts; high mountains; impenetrable forests; the unintermitting wars of the petty tribes, more spirited and ferocious than those of America, and unawed by European troops, or conquests; and particularly the antipathy of the African Mahometans, many of them expelled from Spain, and retaining hereditary rancour against the Franks; have presented obstacles almost unconquerable. Recently Browne has disclosed the small kingdom of Fur or Darfur, and some circumjacent territories; and particularly the river of Bahr Kulla, which seems, as already mentioned, to be the Gir of Ptolemy. The travels of Park establish with certainty that the Nigir flows to the east, as long before delineated in the maps of D'Anville, Gendron, and others; and show that its western sources are nearer the shore than had been imagined. The endeavours of the African Society at London, to promote the geography of this continent, deserve the greatest applause, and their publications are valuable records of the science. It is to be hoped that Mr Hornemann, who has the advantage of profiting by the advice and even disappointment of his predecessors, and seems to have in consequence adopted the necessary concealment and precautions, will at least succeed in detecting the termination of the Gir and Nigir, and in visiting the neighbouring cities, particularly Tombuctoo; for those mentioned by Edrisi may be long ago in ruins.

The ruling religion of this continent is the Mahometan, which has unfortunately penetrated further in the interior, than was at first conceived; and, as already mentioned, has presented a great obstacle to such travellers as, being unaware of this circumstance, have neglected the disguise and simulation, indispensable amidst such a fanatic and intolerant race. The climate which in the north is intensely hot, is rather more moderate in the southern extremity, the antarctic cold being more powerful than that of the other pole. In the centre it would appear that there is a prodigious ridge of mountains, extending from those of Kong in the west to those of Kumri or of the moon, and those of Abyssinia in the east; the whole range being about N. lat. 10°. And



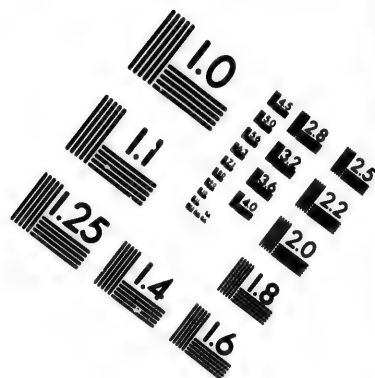
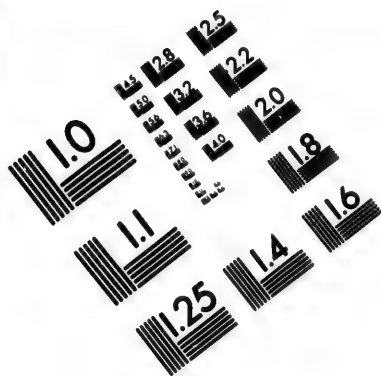
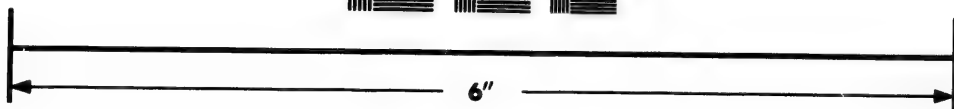
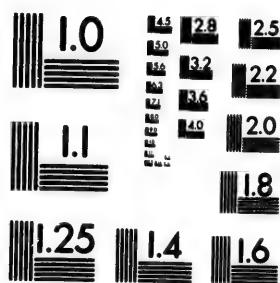


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CLIMATE. from this another chain seems to extend, about long. 30° east from Greenwich, in a southern direction. These ranges of mountains may probably be found to present a climate not expected in the torrid zone, and as adverse to the ancient belief, as that of South America in which the chief features are the Maranon, and excess of moisture: and mountains clothed with perpetual snow.

Inland Seas. In Africa the want of inland seas is not supplied, as in South America, by large navigable rivers; and the singular deficiency of both may be regarded as a radical cause of the striking want of civilization, and slow progress of African geography. For inland seas, or navigable rivers, would have naturally invited commercial intercourse, and foreign settlements, on a far larger scale than the small factories near the coast; and the more southern parts might thus have rivalled the ancient fame of those on the Mediterranean and the Red Sea. But these grand inlets are rather boundaries of Africa: and there are no navigable waters which can diffuse commerce and industry from the shore to the centre.

Lakes. It is probable that considerable lakes may be discovered near the interior ranges of mountains; at present that of Maravi, S. lat. 10°, is alone of such magnitude as to require notice in a general description; and even of this there is no certain nor precise knowledge.*

Rivers. The chief river hitherto discovered is the Nile, which rises in the Gebel el Kumer, or mountains of the moon, in a district called Donga, N. lat. 8°. It is first known by the name of Bahr el Abiad, or the White River; and about lat. 16° is joined by the Bahr el Azrek, or the Blue River; the former tinged, the latter clear; circumstances which occur in the Maranon, and the Missouri, in which the chief stream is

* I was informed at Paris by an intelligent Portuguese that several old MSS. mention this lake, chiefly from the reports of the Bororos in the northern part of whose territory it lies, and who add that mermaids are seen there. The materials which D'Anville used for his curious map of Eastern Africa, inserted in Le Grand's Translation of Lobo's Voyage to Abyssinia 1727, I could not discover after the most eager research. M. Demanne, who possesses the plates of his maps and many of his papers, could find nothing; and M. Barbié du Bocage, geographer to the minister of the exterior, in vain examined the vast collection of the maps and materials which belonged to D'Anville, and are now lodged in that depot. D'Anville expressly mentions that it is compiled from the best memoirs, and chiefly from those of the Portuguese; but as it is one of his first productions it cannot deserve equal confidence with the others, and he himself in his map of Africa afterwards restricted the Lake of Maravi to narrower bounds.

muddy. The Bahr el Azrek, or Blue River, was mistaken for the real Nile by the Portuguese writers, Alvarez, Tellez, &c. probably misled by the vain glory of the Abyssinians; though it is well known to the ancients as quite a distinct river, the Astapus, flowing into the Nile from the Coloe Palus, now the lake of Dembea.* The comparative course

* Mr. Bruce's vanity led him to adopt the same mistake; and it is said that after conversing with D'Anville at Paris, who shewed him the gross ignorance of his pretensions, our traveller, who has great merit in other respects, wisely resolved to strike out the White River from his map, though he acknowledge in his work that it is the largest stream! Gosselin, *Recherches*, ii. 120, pronounces Bruce the most credulous and enthusiastic of mankind; but, with greater justice, adds, that he has only repeated the discoveries which the jesuits had made a century and a half before. Yet Gosselin's Ophir, which he finds in the obscure village of Doffir in Yemen, is a most ridiculous position. He forgets that the Phenicians, who directed the fleets of Solomon, had probably explored Britain before that period. It seems highly probable that Ophir was on the eastern coast of Africa: and perhaps Ophir was the original Phenician term for that continent. Equally ridiculous is Gosselin's idea, ii. 67, that *Sera*, the capital of the Seres, was Serinagar on the Ganges!

In his original journals, which have unluckily been printed in the last edition, Edin. 1805, Mr. Bruce has the following remark, vii. 91, "The Tacazze, or Atbara, joins the Nile four days on the other side of Shendi, or three days on the side of Berber. The place is called Magiran, which, in Arabic, signifies the junction. In summer it is so shallow you pass it on foot, the water taking you up only mid-leg. All the rivers in these countries fail when the sun goes south of the Line, however abundant and full they were before; and were it not for the Abiad, which rises near the Line, and whose inundation is perpetual, from its enjoying the rains of both rainy seasons, the Nile itself would be eight months in the year dry, and at no time arrive across the desert in so much fulness as to answer any purposes of agriculture in Egypt. The Abiad river is three times as big as the Nile." And p. 92, "The Nile would fail, were it not for the never-failing Abiad, or Bahar el Aice; this rising near the Line, considerably south of the sources of the Nile in the latitudes where fall perpetual rains. It never decreases, but it is always full." But in his printed narrative, and his general map, there is no such town as el Aice; nor any such river as the Abiad, which rises near the Line, is three times as large as the Nile, and without which the Nile would be utterly dry for eight months! It is therefore evidently a posterior idea, in order to assume more importance to his travels, that has induced our very veracious traveller to suppress these most important circumstances in his printed narrative; never suspecting that an honest editor would prove him to be guilty of the most gross and impudent falsification, from the incontrovertible evidence of his own testimony.

The editor, by way of apology, vii. 393, says, that Mr. Bruce mistook the true course of the Abiad by confounding it with the Maleg; and that the Abiad has only been discovered to be a principal branch of the Nile since Mr. Bruce wrote! Whereas every system of geography, Greek, Roman, Arabian, or modern, demonstrates the general and just opinion of all nations, and all ages, that the source of the Nile was to be sought, not in Abyssinia, where our very learned traveller might as well have sought the source of the Ganges, but, at least, ten degrees or six hundred g. miles to the S. W. ! Nor did Mr. Bruce's misrepresentation, which has rendered his name proverbial on the

muddy.

RIVERS.

course of the Nile may be esteemed at about 2000 B. miles, thus nearly rivalling the longest Asiatic rivers: and it is at any rate only supposed to be exceeded by the Ob, Kian Ku, and Hoan Ho; as it is by the Marañon, and probably by the Missouri. The Nile forms some considerable cataracts, the chief being that of Geanadil in Nubia; before it gain the level of Egypt, after passing some rapids to the S. of Syene. Its other features are intimately connected with the account of Egypt.

The other chief rivers are the Nigir, and the Gir, already mentioned, the course of each being probably about 1000 B. miles. That of Senegal is also considerable. In the southern parts the Zahir or Barbela of Congo, and the Zambezi of Mocaranga, are the most considerable yet known. It is not however wholly improbable that there may be some great rivers, descending from the central ridges of mountains, though

the continent, as that of the most ignorant and credulous of all modern travellers, proceed from mistake, or a want of profound learning, as the editor would infer, for the commonest maps of D'Anville and others, known to every student of geography, would have taught him the truth; had he not resolved, in consequence of his conversation with D'Anville, who told him roundly that he had made no discovery whatever, utterly to sacrifice the truth, though fresh in his memory, and recorded with his own hand, to the most puerile vanity; with the weakness of his ostriches in the desert hiding his head that no one might see him, and never suspecting that his own journals would betray his falsifications.

The late editor of Mr. Bruce's travels, Edin. 1805, 7 vols. 8vo. has affected to controvert (for he shews some hesitation, though in duty bound to defend his author) the opinion expressed in this work concerning the source of the Nile; and says, that sometimes the source of a river is not computed from the longest stream. 1st. This is true only with regard to a short distance of ten, twelve or perhaps twenty miles; but the difference here is about six hundred miles. 2d. Ancient reputation can alone change the established rule; but the Nile of Bruce is the Astapus of the ancients, who placed the Nile far to the S. W. so that Mr. Bruce's idea is not only adverse to the principles of geography, but is completely vain and illiterate, as it contradicts the sentiments of all the ancients, who knew more of Africa than the moderns.

The vanity of the Abyssinians cannot change the course of nature, nor corrupt all the sources of geographical knowledge, more than the gross ignorance of Mr. Bruce, originally a wine merchant, and engaged in pursuits wholly remote from science, into which, when he happens to wander, he often falls headlong. How fit he was to write the history of Abyssinia may be judged from his knowledge of that of his own country. He openly pretends, iv. 215, to be a descendant of the Bruces, kings of Scotland, while, in fact, i. 6. &c. his grandfather was David Hay, who assumed the name of Bruce on his marriage with the heiress of Kinnaird. As female lineage cannot be admitted in modern genealogy, it may be said that he knew his own source as little as the source of the Nile.

their

their estuaries be so impeded by sandbanks, or divided by deltas, as to have escaped the notice of mariners.

The mountains of Atlas attracted the particular observation of the ancients, who fabled that they supported the firmament; and derived from them the celebrated appellations of the Atlantic ocean and the Atlantic islands. When D'Anville supposes that the greater Atlas of Ptolemy is Cape Bojador, he evinces that he himself erred by extending the ancient knowledge too far to the south. Views of the head lands and mountains visible from the sea would again be requisite for this discussion; but in no map is the Atlas represented as extending so far to the south; and the greater Atlas would rather seem to be Cape Geer, where the chain probably terminates, or thence extends in the same direction, as not unusual, till it constitute the isles called the Canaries. Ptolemy's delineation of the Atlas is singularly broken and indistinct. In some modern accounts this ridge is considered as dividing the kingdom of Algier from Zeb and Bilidulgerid, that is, the direction is S. W. and N. E. which seems also confirmed by Dr. Shaw, though he acknowledges considerable difficulties.⁵ So far as the materials will admit, the

Mountains.

Atlas.

⁵ Travels, 1738, folio, p. 18. &c.

M. Desfontaines, in his *Flora Atlantica*, thus expresses himself; "the Atlantic Mountains are directed into two principal chains, of which the one towards the desert is called the Great Atlas, and the other towards the Mediterranean is called the Little Atlas. They run in a parallel direction from E. to W. and between them are many intermediate mountains, and very fertile vallies watered with numerous rivers and rivulets."

Strabo, lib. 17. mentions the Atlas as called *Dyris* by the natives, and only describes it as being beyond the Pillars of Hercules, on turning to the left or south; the ancients indeed seeming to regard it as one high mountain, not as a ridge. Mela, lib. i. cap. 4. mentions the Atlantae as the furthest people on the west. Pliny, as usual is the most learned, lib. v. cap. 1. He also describes Atlas as a detached mountain, rising from the sands to a great height, on the shores of the ocean to which it gave its name; yet towards the end of the chapter he describes it as a range passed by Suetonius Paulinus on his progress to the Nigir. It is to be regretted that Pliny's geography, perhaps the most interesting of all antiquity, has not been translated and illustrated, as it has been in a singular manner neglected by D'Anville, and most other inquirers into ancient geography, who seem only to recur to geographers strictly so called.

From Mr. Lempriere's journey in Morocco the range of the Atlas seems clearly ascertained. the town of Santa Cruz standing near its furthest extremity; while Tarudant, to which he passed through an open plain, is, by his account, on the S. of the Atlas. Thence Cape Geer is the clear termination, or the great Atlas of Ptolemy, while the smaller Atlas is a branch extending towards

Saffi.

MOUNTAINS. the Atlas may be considered as extending from Cape Geer in a N. E. direction, and giving source to many rivers flowing N. and S. till it expire in the kingdom of Tunis. This main ridge may perhaps, in some places, present a double chain, and in others diverge in branches. From the accounts of some French mineralogists, who have visited the western extremity, the structure is granitic and primitive.

Others. Further to the east the ranges of mountains or rather hills, in what is called the Country of Dates, cannot be considered as portions of the Atlantic range. Along the western shores of the Arabian Gulf extends a celebrated ridge of red granite, which supplied the famous obelisks of Egypt; and of which one mountain was styled that of emeralds from the quarries of that gem: in the same vicinity were the quarries of the celebrated green breccia, recently observed by Roziere, but which Bruce has confounded with the marble called *verde antico*.* The high mountains of Abyssinia seem to branch from the great central chain already mentioned, or rather from its junction with that on the west of the Red Sea; but the natural history remains unknown. The conjectural ridge proceeding south is supposed to terminate about lat. 25°, as the high mountains on the north of the European colony of the Cape pass E. and W. and the Orange River rising from their northern base is supposed to follow a N. W. and W. direction. The mountains of the Cape seem chiefly of blue schistus, siliceous sandstone, and granular quartz, interspersed with large masses of granite, which are often found hollow, as if they had contained some softer substance.

Deserts. But the most striking feature of Africa consists in the immense deserts, which pervade many parts of that continent; and may perhaps be found to comprise one half of its whole extent. Of these the chief is that called *Zaara* or *the Desert*, by eminence, stretching from the shores of the Atlantic, with few interruptions, to the confines of Egypt, a space of more than forty-five degrees, or about 2500 g. miles, by a breadth

Saffi, Lempriere, p. 75, or Cape Cantin: and another branch now called the Lesser Atlas reaches to Tangier. The Arabian geographers extend the Atlas (Daran) through Tripoli, but this opinion is contradicted by modern observation, and even by the maps of Ptolemy.

* See Egypt.

of twelve degrees or 720 g. miles. This prodigious expanse of red sand, and sandstone rock, presents, as it were, the ruins of a continent; and perhaps gave rise to the fable of Atlantis, a region at first conceived to be seated in the sands on the west of Egypt; and afterwards, like other fables, passing gradually further before the light of discovery. This empire of sand defies every exertion of human power or industry; but it is interperfed with various islands of different sizes, of which Fezzan is the chief which has yet been explored. A recent traveller in Morocco says that caravans frequently pass from Tafilet to Tombut or Tombuctoo, by the country of the Mohafres and Thouat.* "The city of Thouat is in the interior parts of the country, about thirty days journey from Tafilet. From Thouat the caravans proceed directly to Tombut. There is much greater danger in passing the two deserts between Tafilet and Thouat, than between the latter place and Tombut." Thouat seems to be the Toudeney of some recent maps; and the vast desert instead of being more justly considered in the aggregate, is divided into portions of distinct appellations, as the travellers happen to meet with islands, saline pools, or other circumstances.

In the southern parts of Africa, towards the European settlements, there are also deserts of great extent; but it seems probable that the central ridges of mountains, already indicated, preserve vegetation where they extend; and it is understood that the Portuguese have been prevented from passing from Congo to Zanguebar by ranges of mountains full of the most ferocious animals, and impeded by that thick thorny underwood which is peculiar to African forests. Yet there is probably, as in Asia, a wide desert table-land between the E. and W. ranges, pervaded by the Giagas or Jagas, who seem to be the Tatars of southern Africa; and who are said sometimes to have roamed from Mozambique to the vicinity of the Cape of Good Hope.

In arranging the following brief description of Africa, the first account shall be that of Abyssinia, the chief native power, so far as hitherto discovered. Thence by Egypt, in a geographical progression, the route shall embrace the Mahometan states in the north, the Western

Arrangement.

* Lempriere, 343, 344.

DESERTS. Coast, and the Cape of Good Hope. The progress shall then be continued along the Eastern Shores: nor must the noble island of Madagascar be forgotten. The Smaller Islands which must be arranged with Africa are, Bourbon, Mauritius, &c.; nor can Kerguelen's Land be properly allotted to any other division of the globe. The geographical voyage then bends to the N. W. by St Helena, the islands of Cape Verd, the Canaries, and Madeira. The whole description shall be closed with a summary of the discoveries, and conjectures, concerning the central parts of this great continent.

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ABYSSINIA.

*Extent.—Original Population.—Progressive Geography.—Religion.—Government.
Population.—Army.—Revenues.—Manners and Customs.—Language.—Cities.
—Manufactures and Commerce.—Climate and Seasons.—Rivers.—Lakes.—
Mountains.—Botany.—Zoology.—Mineralogy.—Natural Curiosities.*

THIS kingdom, which exceeds in antiquity and stability any of the EXTENT,
African states, extends about eleven degrees in length from north
to south, that is, about 660 geographic or 770 B. miles. The medial
breadth is about eight degrees of longitude, in lat. 10°, or 480 g. miles,
about 550 British. On the east the chief boundary is the Red Sea: and
it is divided from the kingdom of Adel by an ideal line: on the south,
mountains and deserts seem to part it from Gingiro and Alaba, while on
the west and north, mountains and forests constitute the barriers towards
Kordofan and Sennaar. It is divided into provinces, of which Tigri
is remarkable for the transit of commerce to the Arabian gulf; Gojam
for the sources of the Astapus or fabled Nile of the Abyssinians; and
Dembea for a noted lake, and Gondar the capital of the monarchy.

It seems sufficiently established, that Abyssinia was peopled, at a very Original
Population,
early period, by a colony from the opposite shores of Arabia; and the
people still retain Arabian features, though their complexions be darker
than those of their progenitors; but they have neither the sin-
gular construction of the negro skull, nor other peculiarities of the

ORIGINAL
POPULA-
TION.

race.* In the year 333 the Abyssinians were converted to christianity, their general tenets being those of the Greek church, received from the patriarch of Alexandria; but they still retain the African circumcision, a native and aboriginal rite wholly unconnected with religion. As the Arabs impute every thing marvellous to Solomon, so these their descendants, and in frequent habits of intercourse, have adopted the same ideas, which are strengthened by religious fable and tradition. Hence the Abyssinian kings claim a descent from that monarch, in the same mode of reasoning as the Arabs deduce the noble genealogy of their steeds from the stalls of Solomon. The Queen of Sheba, or Saba, in Arabia Felix, has also been transferred to the other side of the gulph. Some credulous travellers have fondly adopted these idle tales; though they allow that the Abyssinian annals are dubious, broken, and obscure; and the natives had not even the use of letters till they were converted to christianity. From more certain sources it may be traced that the Axumites or Abyssinians were considerably civilized in the sixth century, and carried on some trade with Ceylon.† In the same century the *Najashi*, Neguz, or king, of Abyssinia conquered the Arabian monarchy of the Homorites in Yemen; and a Roman ambassador appeared in the royal city of Axumé, which existed in the time of Alvarez; but the territory could not be very extensive, as there were only seven bishops, subject to the patriarch of Alexandria.

Progressive
Geography.

The progressive geography of this country may be traced with tolerable accuracy, from the time of Ptolemy, who describes its chief features, the two large rivers called Astapus and Astaboras, now the Bahr el Azrek and the Tacuzzi or Atbara, and the lake Coloe or Dembea, with the royal city of Axumé, now a village called Axum. The Arabian geographers supply the interval between ancient and modern knowledge.

* Volney has with sufficient precipitation pronounced, that the ancient Egyptians were negroes, though he had only to look at their descendants the Copts, at any of their ancient gems, or other representations, or even at the monuments themselves, to perceive his error. But Volney was labouring for the emancipation of the negroes; and that species of reasoning ignorance, which is too often called philosophy, is itself over-run with the most singular prejudices. He confessed to me however, that he had since retracted his opinion.

† Gibbon, vii. 342.

The religion, as already mentioned, is the christian, but strangely degraded with some peculiar forms and practices, too minute to be here detailed.* The government is absolute and hereditary, but with a kind of election in the royal family; and the king is saluted with prostration. A striking and romantic singularity was that the princes were educated on a lofty and solitary mountain, a practice long since abandoned. Concerning the population of this country there seems no authentic evidence. Alvarez pronounces it one of the most populous regions in the world; but this seems one of the usual Spanish and Portuguese exaggerations. By Bruce's account it is extremely difficult to raise the royal army above thirty thousand: yet in so barbarous a state it might be concluded that every tenth person joins the army.† But so thin a population is incredible, and it seems probable that it may amount to two or three millions. The royal revenues consist of the rude products of the various provinces, the use of money being unknown, though gold be found in the sand of the rivers. One of the chief articles is cattle, which are numerous, and sold at a low price.

RELIGION.

Government.

Population.

Army.

Revenues.

The natives are of a dark olive complexion; and the dress a light robe, bound with a sash, the head being covered with a kind of turban.‡ The houses are of a conic form, meanly built of clay, and covered with thatch; and even the churches are of a round form, encircled with a portico. Christianity seems to hold but a slight influence over the manners and morals, and the priests are little respected. Engaged in the constant suppression of insurrections or in petty warfare with the surrounding states, particularly the Galas, who seem a tribe of the Jagas, the government of Abyssinia pays little attention to the progress of industry and civilization. After fifteen centuries of christianity, this country recalls the image of the barbarous states of Europe in the seventh or eighth centuries. To some nations, particularly the negroes and the savages of America, cruelty seems so familiar, and sympathy or compassion so utterly unknown, that the sufferings of

Manners and Customs.

* Their creed is minutely examined by Godignus *de Abassinorum Rebus*, &c. Lugd. 1615, 8vo.

† Bruce, vi. 59, computes the royal army of Abyssinia, on a great occasion, at only twenty thousand.

‡ Poncet in Lockman, i. 230, &c. From a just enmity against the sanguinary and fanatical Portuguese missionaries, they detest the resemblance of a white complexion, and even shew an aversion to white grapes. Ib. 241.

MANNERS
AND
CUSTOMS.

another are not only unfelt, but viewed with an unaccountable kind of delight. Were it not for this unpleasant truth, the reports of some travellers would scarcely be credible, when they assure us that, at an Abyssinian banquet, the flesh is cut from the live oxen. Others however only affirm that the natives are fond of raw flesh, a taste not unknown to the people of Tibet, and other countries. Even religion sometimes bends before the influence of climate, and polygamy is not unknown among these christians; the kings in particular having frequently many wives and concubines. By a singular custom the wife is punished if the husband prove false. The only meal is commonly in the evening, and the abstinence of Lent is carefully preserved; nay, according to Alvarez the clergy and monks only eat three times a week. The common beverages are mead and a kind of beer.* The neguz or king, for the title of emperor is ridiculous, is considered as the sole proprietor of the land, while private property is restricted to moveable goods.

Mr. Bruce, who is lively and judicious in his accounts of manners, gives the following description of an Abyssinian festival.

"Consistent with the plan of this work, which is to describe the manners of the several nations through which I passed, good and bad, as I observed them, I cannot avoid giving some account of this Polyphemus banquet, as far as decency will permit me; it is part of the history of a barbarous people; whatever I might wish, I cannot decline it.

"In the capital, where one is safe from surprise at all times, or in the country or villages, when the rains have become so constant that the vallies will not bear a horse to pass them, or that men cannot venture far from home through fear of being surrounded and swept away by temporary torrents, occasioned by sudden showers on the mountains; in a word, when a man can say he is safe at home, and the spear and shield are hung up in the hall, a number of people of the best fashion in the villages, of both sexes, courtiers in the palace, or citizens in the town, meet together to dine between twelve and one o'clock.

"A long table is set in the middle of a large room, and benches beside it for a number of guests who are invited. Tables and benches the Portuguese introduced amongst them; but bull hides, spread upon the ground,

* Alvarez, fol. 200. Lobo, p. 54.

served them before, as they do in the camp and country now. A cow or a bull, one or more, as the company is numerous, is brought close to the door, and his feet strongly tied. The skin that hangs down under his chin and throat, which I think we call the dew-lap in England, is cut only so deep as to arrive at the fat, of which it totally consists, and by the separation of a few small blood-vessels, six or seven drops of blood only fall upon the ground. They have no stone, bench, nor altar upon which these cruel assassins lay the animal's head in this operation. I should beg his pardon indeed for calling him an assassin, as he is not so merciful as to aim at the life, but, on the contrary, to keep the beast alive till he be totally eaten up. Having satisfied the Mosaic law, according to his conception, by pouring these six or seven drops upon the ground, two or more of them fall to work; on the back of the beast, and on each side of the spine, they cut skin-deep; then putting their fingers between the flesh and the skin, they begin to strip the hide of the animal half way down his ribs, and so on to the buttock, cutting the skin wherever it hinders them commodiously to strip the poor animal bare. All the flesh on the buttocks is cut off then, and in solid, square pieces, without bones or much effusion of blood; and the prodigious noise the animal makes is a signal for the company to sit down to table.

"There are then laid before every guest, instead of plates, round cakes, if I may so call them, about twice as big as a pan-cake, and something thicker and tougher. It is unleavened bread of a fourish taste, far from being disagreeable, and very easily digested, made of a grain called teff. It is of different colours, from black to the colour of the whitest wheat-bread. Three or four of these cakes are generally put uppermost, for the food of the person opposite to whose seat they are placed. Beneath these are four or five of ordinary bread, and of a blackish kind. These serve the master to wipe his fingers upon, and afterwards the servant for bread to his dinner.

"Two or three servants then come, each with a square piece of beef in their bare hands, laying it upon the cakes of teff, placed like dishes down the table, without cloth or any thing else beneath them. By this time all the guests have knives in their hands, and their men have the large crooked ones, which they put to all sorts of uses during the time of war.

The

served

MANNERS.
AND
CUSTOMS

The women have small clasped knives, such as the worst of the kind made at Birmingham, sold for a penny each.

"The company are so ranged that one man sits between two women; the man with his long knife cuts a thin piece, which would be thought a good beef-steak in England, while you see the motion of the fibres yet perfectly distinct, and alive in the flesh. No man in Abyssinia, of any fashion whatever, feeds himself, or touches his own meat. The women take the steak and cut it length-ways like strings, about the thickness of your little finger, then crossways into square pieces, something smaller than dice. This they lay upon a piece of the teff bread, strongly powdered with black pepper, or Cayenne pepper, and fossile-salt; they then wrap it up in the teff bread like a cartridge.

"In the mean time, the man having put up his knife, with each hand resting upon his neighbour's knee, his body stooping, his head low and forward, and mouth open, very like an idiot, turns to the one whose cartridge is first ready, who stuffs the whole of it into his mouth, which is so full that he is in constant danger of being choked. This is a mark of grandeur. The greater a man would seem to be, the larger piece he takes in his mouth; and the more noise he makes in chewing it, the more polite he is thought to be. They have, indeed, a proverb that says, "Beggars and thieves only eat small pieces, or without making a noise." Having dispatched this morsel, which he does very expeditiously, his next female neighbour holds forth another cartridge, which goes the same way, and so on till he is satisfied. He never drinks till he has finished eating; and before he begins, in gratitude to the fair ones that fed him, he makes up two small rolls of the same kind and form; each of his neighbours open their mouths at the same time, while with each hand he puts their portion into their mouths. He then falls to drinking out of a large handsome horn; the ladies eat till they are satisfied, and then all drink together, "*Vive la Joye et la Jeunesse!*" A great deal of mirth and joke goes round, very seldom with any mixture of acrimony or ill-humour.

"At this time the unfortunate victim at the door is bleeding indeed, but bleeding little. As long as they can cut off the flesh from his bones, they do not meddle with the thighs, or the parts where the great arteries are.

are. At last they fall upon the thighs likewise; and soon after the animal, bleeding to death, becomes so tough that the cannibals, who have the rest of it to eat, find very hard work to separate the flesh from the bones with their teeth like dogs.

"In the mean time, those within are very much elevated; love lights all its fires, and every thing is permitted with absolute freedom. There is no coyness, no delays, no need of appointments or retirement to gratify their wishes; there are no rooms but one, in which they sacrifice both to Bacchus and to Venus. The two men nearest the vacuum a pair have made on the bench by leaving their seats, hold their upper garment like a screen before the two that have left the bench; and, if we may judge by sound, they seem to think it as great a shame to make love in silence as to eat. Replaced in their seats again, the company drink the happy couple's health; and their example is followed at different ends of the table, as each couple is disposed. All this passes without remark or scandal; not a licentious word is uttered, nor the most distant joke upon the transaction.

"These ladies are, for the most part, women of family and character; and they and their gallants are reciprocally distinguished by the name Woodage, which answers to what in Italy they call Cicisbey; and indeed I believe, that the name itself, as well as the practice, is Hebrew; schus chis beüm signifies attendants, or companions of the bride, or bride's man, as we call it in England. The only difference is, that in Europe the intimacy and attendance continue during the marriage ceremony. The aversion to Judaism, in the ladies of Europe, has probably led them to the prolongation of the term.

"It was a custom of the ancient Egyptians to purge themselves monthly for three days; and the same is still in practice in Abyssinia. We shall speak more of the reason of this practice in the botanical part of our work, where a drawing of a most beautiful tree, used for this purpose, is given.

"Although we read from the Jesuits a great deal about marriage and polygamy, yet there is nothing which may be averred more truly than that there is no such thing as marriage in Abyssinia, unless that which is contracted by mutual consent, without other form, subsisting only till dissolved by dissent of one or other, and to be renewed or repeated as

CUSTOMS
AND
MANNERS.

often as it is agreeable to both parties, who when they please, cohabit together again as man and wife, after having been divorced, had children by others, or whether they have been married, or had children with others or not. I remember to have once been at Koscam in presence of the Iteghe, when, in the circle, there was a woman of great quality, and seven men who had all been her husbands, none of whom was the happy spouse at that time.

"Upon separation they divide the children. The eldest son falls to the mother's first choice, and the eldest daughter to the father. If there is but one daughter, and all the rest sons, she is assigned to the father. If there is but one son, and all the rest daughters, he is the right of the mother. If the numbers are unequal after the first election, the rest are divided by lot. There is no such distinction as legitimate and illegitimate children from the king to the beggar; for supposing any one of their marriages valid, all the issue of the rest must be adulterous bastards.

"One day Ras Michael asked me, before Abba Salama, (the Acab Saat) "Whether such things as these promiscuous marriages and divorces were permitted and practised in my country?" I excused myself till I was no longer able; and upon his insisting, I was obliged to answer, "That even if Scripture had not forbid to us as Christians, as Englishmen the law restrained us from such practices, by declaring polygamy felony, or punishable by death."

"The king in his marriage uses no other ceremony than this:—He sends an Azage to the house where the lady lives, where the officer announces to her, "It is the king's pleasure that she should remove instantly to the palace." She then dresses herself in the best manner, and immediately obeys. Henceforward he assigns her an apartment in the palace, and gives her a house elsewhere, in any part she chooses. Then when he makes her Iteghe, it seems to be the nearest resemblance to marriage; for whether in the court or the camp, he orders one of the judges to pronounce in his presence, "That he, the king, has chosen his hand-maid," naming her, "for his queen;" upon which the crown is put upon her head, but she is not anointed."*

Language.

The language is regarded as an ancient offspring of the Arabic,

* Bruce's Travels, vol. iv. p. 482. 8vo.

and

and is divided into various dialects, among which the chief are the Tigrin or that of the province of Tigri, and the Amharic. The Galanic is also widely diffused, the Galas being a numerous adjacent people, who frequently disturb the public tranquillity. The Abyssinian language is illustrated by the labours of Ludolf, and several missionaries; and is probably nearly allied to the Coptic, the Egyptians passing from the north of the ancient Arabia, and the Abyssinians from the south.

LANGUAGE.

The chief city in modern times is Gondar, situated upon a hill. According to Bruce it contains ten thousand families, that is about fifty thousand souls; but in the time of Alvarez none of the cities was supposed to exceed fifteen hundred houses. The palace, or rather house of the neguz, is at the west end, flanked with square towers, from the summit of which was a view of the southern country, as far as the lake of Tzana or Dembea. Axum, the ancient capital, is still known by extensive ruins, among which are many obelisks of granite, but without hieroglyphics. The other towns are few and unimportant. On the rock of Geshen, in the province of Amhara, were formerly confined the Abyssinian princes: and Abyssinia in general is remarkable for detached precipitous rocks, appearing at a distance like castles and towns, a feature also usual in New Granada, and other north-eastern parts of South America. The rock of Ambazel, in the same province, has also been dedicated to the same political purpose, both being near a small river which flows into the Bahr el Azrek. The manufactures and commerce are of small consequence, the latter being chiefly confined to Mafua on the Rêd Sea. The earthen ware is decent; but though Cosimo de Medici, among other artisans, sent manufacturers of glass to the neguz, the Abyssinians still seem strangers to this, and many other common fabrics.

CITIES.

Manufactures and Commerce.

The climate is attempered by the mountainous nature of the country. From April to September there are heavy rains; and in the dry season of the six succeeding months the nights are cold. Alvarez has long ago remarked that the rise of the Nile in Egypt is occasioned by the violent rains, which, during the summer, deluge the southern regions; and he might perhaps have added the melting of the snows in the African alps,

Climate and Seasons.

CLIMATE
AND SEA-
BUNDS.

Rivers.

which give source to the real Nile the Bahr el Abiad; for as the Atlas is covered with perpetual snow, which also crowns the Andes under the equator, it is probable that the central ridge of Africa presents the same features, and that an ancient geographer might have been frozen to death in his torrid zone. Abyssinia is one of the most mountainous and precipitous countries in the world; but in a few vales the soil is black and fertile. The chief river is the Bahr el Azrek, or Abyssinian Nile, which has a spiral origin like the Orinoco. The sources were, in the seventeenth century, accurately described by Payz, a Portuguese missionary, whose account was published by Kircher and Isaac Vossius, and has in our times been very minutely copied by Bruce, as Hartman has explained by printing the two accounts in parallel columns. The chief spring of the Bahr el Azrek is in a small hillock, situated in a marsh. The sources of the real Nile or Bahr el Abiad, in the alps of Kumri, remain to be explored. Receiving no auxiliary streams on its long progress through Egypt, the Nile is singularly narrow, and shallow, when compared with other rivers of far shorter course. The Bahr el Azrek is styled by the Abyssinians Abawi, a name of uncertain origin; and is followed by the Tacuz or Tacuzzi the Astaboras of the ancients, as the Abawi is the Astapus.* Another considerable stream, is the Maleg, which joins the Abawi after a parallel course on the west: this river Bruce has vainly endeavoured to confound with the Bahr el Abiad or White River; which, as he might have learned from the map of D'Anville 1749, is 300 miles to the west of the Maleg; and receives the Abawi at about the same distance from its junction with the former river. Several tributary streams join the Abawi and the Tacuz. Two other rivers, the Hanazo and the Hawash, flow in an opposite direc-

* The Abawi presents a remarkable cataract at a place called Alata, not far from its egress out of the lake of Tzana. The grand cataract of the Nile is in Nubia, lat. 22°.

Bruce, v. 105, says that the fall is about forty feet; but he exaggerates the river, when increased by rain, to the breadth of half an English mile; and adds a curious circumstance, *if true*, that the river was quite clear though in a state of inundation! He reproves Lobo for saying that he sat under the arch, not remembering that the cataract of Niagara and others change their positions and forms, from age to age; and Lobo would have laughed at the idea of a river being clear when swelled with rains. His conjecture v. 255. that the Mountains of the Moon are in Abyssinia, is worthy of his profound knowledge of Greek, Roman, and Arabian geography.

tion, towards the entrance of the Red Sea, but the first is said to be lost Rivers.
in the sands of Adel.

The chief lake is that of Tzana, also called Dembea, from a cir- Lakes.
cumjacent province. This lake is pervaded by the Nile in its circular progress, as the lake of Parima by the Orinoco, being about 60 B. miles in length by half that breadth: but the extent differs greatly in the dry and wet seasons. Among other islands there is one in the midst called Tzana, which is said to have given name to the lake. In the southern extremity of the kingdom is the lake of Zawaja, a chief source of the Hawash; and among many smaller expanses of water may be named the lake of Haik, near the royal rocks of Geshen and Ambazel.

The mountains of Abyssinia seem irregularly grouped, being at the Mountains.
junction of that chain which borders the western shores of the Red Sea, and of that far superior ridge which pervades central Africa from east to west in a N. W. and S. E. direction, giving source to the Nigir and the river of Senegal at one extremity, and at the other to the Gir and Nile. Hence on the east side of Abyssinia the ridges probably pass N. and S. and in the southern part W. and E. As in other high ranges of mountains, there are three ranks, the chief elevations being in the middle. On the east of the kingdom are the heights of Taranta; and towards the centre the Lamalmon: while in the south is the Ganza. Tellez idly asserts that the Abyssinian mountains are higher than the Alps or Pyrenees: he adds that the loftiest are those of Amhara and Semena, that is towards the centre of the kingdom, whence rivers flow in all directions. The precipices are tremendous and truly alpine. Abyssinia presents a rich field of natural history.

The few scanty fragments of Abyssinian botany contained in the Botany.
works of Ludolph, Lobo, and Bruce, are unfortunately our only materials for the flora of eastern Africa; nor can these be wholly depended upon, as two of the above authors wrote before the existence of scientific botany, and the third, besides his ignorance on this subject, seems too much disposed to aggrandise his brief catalogue by representing common plants as rare and even new species.

The:

tion,

BOTANY.

The sycamore fig, the *erythrina corallodendron*, the tamarind, the date, the coffee, a large tree used in boat-building, called by Bruce rack, and two species of mimosa or acacia, though probably not the principal trees, are almost the only ones that have hitherto been described. The arboresecent euphorbæ are found on some of the dry mountains. A shrub called, in the language of the country, wooginoos, (the *brucea antidysenterica* of Bruce and Gmelin), is celebrated by the British traveller for its medicinal virtues in the disease of which it bears the name, and the cusso or bankia of Bruce, which seems to be a species of rhus, is mentioned by the same author as a powerful anthelmintic. A large esculent herbaceous plant analogous to the banana, called by Bruce ensète, is largely cultivated by the natives as a substitute for bread. The *cyperus papyrus* is found here in shallow places as in Egypt; and the trees that yield the balsam of Gilead, and the myrrh, are represented by the above-mentioned traveller as natives of Abyssinia.

Zoology.

The horses are small but spirited, as usual in alpine countries. Cattle and buffaloes are numerous. Among wild animals are the elephant, rhinoceros, lion, panther; and it is said the giraff or *camelopardalis*. The hyena is also frequent, and singularly bold and ferocious, so as even to haunt the streets of the capital in the night. The extirpation of these animals may be impossible in so mountainous a country, but the circumstance indicates a miserable defect of policy. There are also wild boars, gazels or antelopes, and numerous tribes of monkies, among which is the guereza delineated by Ludolf. The hippopotamus and crocodile swarm in the lakes and rivers. Equally numerous are the kinds of birds, among which is the golden eagle of great size, but water fowl are rare. The most remarkable insect is a large fly, from whose sting even the lion flies with trepidation. The mineralogy of this alpine country must be interesting, but it is neglected by the ignorant natives. Gold is found in the sands of the rivers, and in one or two provinces is observed on digging up trees. There are some slight mines in the provinces of Narea and Damut. Fossil salt is found on the confines of Tigri. It is said that there are no gems, and that even the royal diadem is decorated

Mineralogy.

rated with imitations: some assert that the Abyssinians neglect to search for gold or gems, lest the Turks should be instigated by the reported wealth to invade the country. The chief natural curiosities are the alpine scenes, the precipitous detached rocks, the cataract of Alata, and the river Mareb in the N. E., which is said completely to sink under ground.

MINERALOGY.

Natural Curiosities.

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EGYPT.

Extent.—Original Population.—Progressive Geography.—Religion.—Government.—Population.—Revenues.—Manners and Customs.—Language.—Cities.—Climate.—Face of the Country.—Rivers.—Lakes.—Mountains.—Botany.—Zoology.—Mineralogy.

Extent.

Original
Population.

THIS country, celebrated from the earliest ages of antiquity, and recently a distinguished scene of British valour, both by sea and land, is about 500 miles in length from north to south; and, including the greater and lesser Oasis, about half that breadth. But this appearance is merely nominal; Egypt being in fact a narrow vale on both sides of the river Nile, bounded by parallel ridges of mountains or hills. It seems to have been originally peopled from Hindostan as already mentioned;* the Egyptians and Abyssinians having been in all ages wholly distinct from the native nations of Africa. A late intelligent traveller remarks† that the Copts, or original inhabitants have no resemblance of the negro features or form. The eyes are dark, and the hair often curled, but not in a greater degree than is occasionally seen among Europeans. "The nose is often aquiline, and though the lips be sometimes thick, by no means generally so; and on the whole a strong resemblance may be traced between the form of visage in the modern Copts, and that presented in the ancient mummies, paintings, and statues. Their complexion, like that of the Arabs, is of a dusky brown; it is represented of the same colour in the paintings which I have seen in the tombs of Thebes." Volney had only to

* See the Memoir on Asia, vol. ii.

† Browne, p. 71.

—Government.—

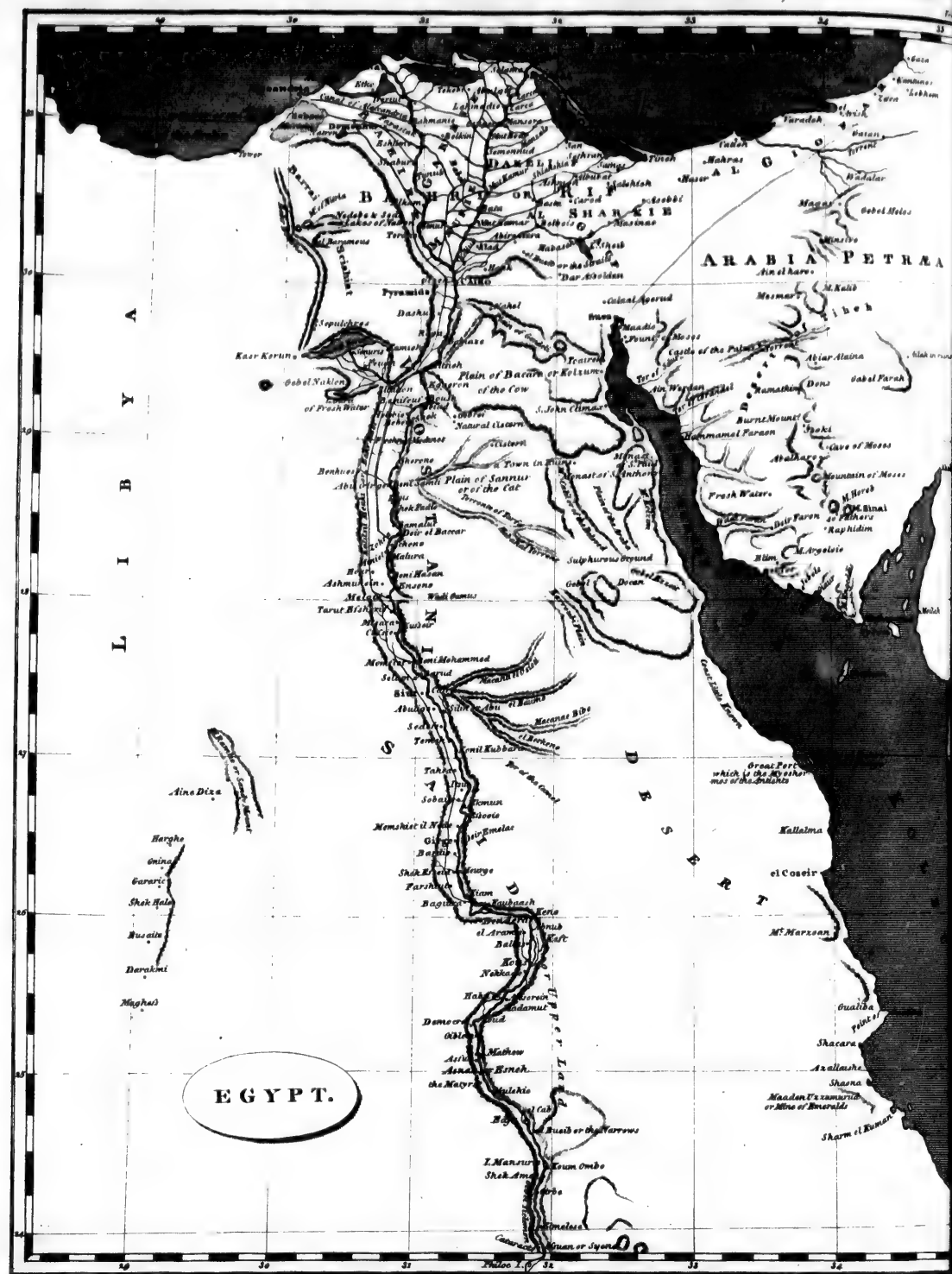
—Cities.—Climate.

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EGYPT.

Published March 2^d 1864, by Colwell and Davies, Strand, and Longman and Rees, Paternoster Row.



EGYPT.

833

inspect a mummy, or a Copt, in order to confute his hypothesis that the Egyptians were negroes; but prejudice is worse than blindness; and the prejudices of ignorant philosophy are equal to those of any other fanaticism. The progressive geography and history of Egypt are familiar to most readers: and the chief antiquities have been so repeatedly described, that, when no new light can be thrown, the repetition would be alike tedious and unnecessary. The chief scenes of antiquity are the pyramids; and the tombs near Thebes, once obstructed and recently disclosed; with many ruins of temples, and other remains of ancient cities. At Achmunein there are curious ancient paintings, the colours being remarkably fresh.*

ORIGINAL
POPULA-
TION.

Progressive
Geography.

Antiquities.

The most complete and satisfactory account yet published of this interesting country, is that given by M. Denon, who attended the French army on the expedition to Upper Egypt, and his narrative is singularly diversified by the events of the war.† The antiquities form the chief object of our learned and ingenious traveller; and Denderah, the ancient Tentyris, impressed him more than any other city. The ruins and tombs of Thebes form another curious object of his researches. "Farther on, I should have regarded Hermontis as superb, if that city had not been placed so near to the gates of Thebes. The temple of Esneh, the ancient Latopolis, appeared to me to be the perfection of art among the Egyptians, and one of the finest productions of antiquity. That of Edfu, or Apollinopolis Magna, is one of the largest, best preserved, and most advantageously situated of the monuments of Egypt. It its present state it still appears like a fortress, which commands the surrounding country."

The pursuit of Murad Bey led a French detachment even beyond the cataracts, so that the isle of Philoe, which may be regarded as the far-

* Dr. White in his *Egyptiaca*, 1801, 4to, inclines to think that the noted column ascribed to Pompey, ornamented a space opposite to the Serapium or temple of Serapis, in which was the great public library; and escaped ancient notice by its connection with that grand edifice. In the Egyptian history, the remarks of Volney concerning the ancient catalogues of kings deserve attention, as they seem to indicate some curious synchronisms. They may be found in the *Encyclopédie Méthodique Art. Antiquités*.

† This magnificent work, in a large folio volume, has already become extremely scarce; but there is a good translation by Mr. Arthur Aikin, London 1803, 3 vols. 8vo. in which the most interesting prints are preserved.

theft post of Egyptian art and antiquity, was inspected at leisure by M. Denon; whose researches and drawings far exceed those of any other traveller, and can only be surpassed by the large account of Egypt, in four folio volumes, about to be published by the French government. The map of Egypt, in fifty sheets, is also anxiously expected.

Beginning with Alexandria, that perpetual monument of the genius and talents of Alexander the Great, M. Denon observes that the pillar called Pompey's, probably belonged to a portico; fragments of other columns of the same substance and diameter being found in the vicinity: but he adds that the pedestal and capital are not of the same granite with the shaft, and of heavy workmanship. If the recent discovery of the inscription in honour of Dioclesian be exact, it might seem that the shaft had remained upon the spot, a fragment of some grand erection by the Ptolemies; and the citizens of Alexandria, by adding the pedestal and capital, erected a cheap monument of their flattery to the Roman emperor. On the pyramids, little additional light is thrown; but the ideas conveyed are more accurate and precise. They were evidently tombs, with a chamber or chambers, where the relations met on solemn occasions, or anniversaries, to celebrate the memory of the defunct. In the tombs of Thebes similar chambers are found with rich decorations. Of the Ibis I saw many specimens at Paris; and it is evidently a curlew as M. Cuvier has long since demonstrated.*

The climate of Egypt contributes greatly to the preservation of monu-

* See this curious subject treated at great length by M. Savigny, member of the institute of Egypt, in his *Histoire Naturelle et Mythologique de l'Ibis*, Paris 1805, 8vo. He first traces the description from the ancients, who mention the white ibis and the black; though the latter be not strictly black, but of a deep bronze colour, with beautiful metallic reflections. But if the bitumen employed in embalming was too much heated, the feathers of the white ibis become black. That the ibis devoured serpents seems a mere imagination of the ancients. Like the other birds of its kind, even the red curlew of Cayenne, and the white of Carolina, it could only have devoured worms, little fish, and aquatic insects. At present the white ibis is not regarded as resident in Egypt. According to the report of the inhabitants, these birds arrive when the Nile begins to increase, probably the real cause of the ancient veneration; their number augments as the river rises, and diminishes with its decrease, after which they return to Abyssinia, where it is remarked that they generally arrive about the end of June. They would appear to reside about seven months in Egypt, at least in the Delta, where some were seen on the 14th January. The black or rather bronze ibis arrives and returns later than the white. So our author; but the Nile rises towards the middle of June and ceases in October; so that he must have confounded the time of their arrival with that of their retreat. It must be supposed that the ibis generally arrives in Egypt in June, and retreats in October; though some may linger till December.

ments of antiquity, and in a country visited by frost and rain, the pyramids would long since have perished.

On his arrival at Siut, M. Denon visited the Libyan chain of mountains, or that on the W. of the Nile. "I had seen two ranges since I left Cairo, without having been able to risk climbing one of them. I found this, as I had supposed, a ruin of nature, formed of horizontal and regular strata of calcareous stones, more or less crumbling, and of different shades of whiteness, divided at intervals with large mamillated and concentric flints, which appear to be the nuclei, or, as it were, the bones of this vast chain, and seem to keep it together, and prevent its total destruction. This decomposition is daily happening by the impression of the salt air, which penetrates every part of the calcareous surface, decomposes it, and makes it as it were dissolve down in streams of sand, which at first collect in heaps at the foot of the rock, and are then carried away by the winds, and encroaching gradually on the cultivated plain and the villages, change them into barrenness and desolation." * Girgeh, the capital of Upper Egypt, is a modern town, containing nothing remarkable; it is as large as Minyeh and Melauï, but less than Siut, and less beautiful than either. The name of Girgeh is derived from a large monastery, more ancient than the town, and dedicated to St. George, a name pronounced Girgeh in the language of the country. It is chiefly interesting, as being placed mid-way between Cairo and Syene, and in a very fertile territory. Near Thebes are the remains of an enormous colossus, which must have been seventy-five feet in height. Our learned and ingenious traveller supposes that this was the real statue of Memnon, and that even the ancient visitants mistook the object of their curiosity.† In another passage he describes two figures of granite, overthrown and bro-

* ii. 3.

† ii. 90. iii. 80. An intelligent young mineralogist, M. Roziere, who accompanied the expedition into Upper Egypt, and to whom I owe many other obligations, gave me a specimen of the supposed statue of Memnon, marked with the inscriptions. It is of the singular pudding stone, described in the subsequent mineralogy of Egypt; and M. Roziere has specially marked that it belongs to the statue that bears the inscriptions, while other fragments which I have seen, and also specially bear to be of the colossus of Memnon, are of a pale red granite. Perhaps the pedestal is of granite, and the statue of that singular pudding stone, about to be mentioned: it is sonorous when struck. It is to be regretted that M. Denon was not a mineralogist, else he might easily have identified the supposed statue of Memnon.

ken, which must have been about thirty-six feet in height; and proceeds to mention two colossi supposed to be those of Memnon. "I again examined the block of granite, which lies between these two statues, and I am still more convinced that it is the ruins of the famous colossal statue of Osymandias, who, on the inscription, braved both the ravages of time and the pride of men; and that the two figures which are left standing, are those of his wife and daughter. I am likewise persuaded, that in a much later period, travellers have chosen to suppose one of the latter statues to be that of Memnon, that they might not be supposed to have come away from Egypt without seeing it, and according to the usual progress of enthusiasm, that they have fancied they heard the sound which it was famed for uttering at the rising of the sun." There is some reason to suspect that the real statue of Memnon was of basalt, and probably of a moderate size, and that being a grand source of superstition, it was utterly destroyed by command of Cambyfes; when the people of the neighbourhood, to keep up a source of gain, had transferred the name to another statue, which from its magnitude could not be removed. In the visit to the tombs of Thebes, the following observations occurred. "From a number of bodies which were not swathed up, I could perceive that circumcision was a constant custom among them, that depilation was not practised among the women; that their hair was long and flexible; and the character of the head was in a fine style. I brought away with me the head of an old woman, which was as striking as that of the sybils of Michael Angelo, and indeed a good deal resembled them."

Esnch is the last town of any importance in Upper Egypt, and presents some noble ruins, as does also Etfu the ancient Apollinopolis. The account of the isle of Philoe, with the views of the entrance of the Nile into Egypt, and of the cataracts, are very interesting; and in general, M. Denon being an excellent draftsman, his plates are more striking than those of any former traveller. His view of the grand quarries of granite near Syene, mentioned by Pococke, which supplied the materials for the celebrated obelisks is also interesting. "The texture of this granite is so hard and compact, that the rocks which are met with in the current, instead of becoming worn and shattered by decomposition, have

have acquired a polish by the dashing of the waves. The finest and most abundant of this kind of stone, is the rose-coloured granite; the grey is often too micaceous; between these blocks are found veins of very brilliant quartz, strata of a red stone, which partakes of the nature and the hardness of porphyry, and masses of that black and hard stone, which has been so long taken for basalt, and which the Egyptians have often employed for statues of moderate size." M. Denon must certainly proceed upon the idea that basalt is a volcanic substance; whereas the Egyptian stone, or real basalt, is not volcanic, as allowed by Dolomieu and Faujas themselves. If he had said that in modern times compact lava has been confounded with basalt, he would have been exact. The noted cataracts, where the Nile enters Egypt, now only present a range of granitic rocks, over which the river forms in some places cascades of a few inches in height; but they may have been worn by the action of the water, and were probably more important in ancient ages. M. Denon's return to Thebes, and the account of the paintings in the tombs form, perhaps the most interesting portion of his valuable work. The paintings shew, in the curious representations of articles and furniture, that the Egyptians were no strangers to modern ease and luxury. The drawings of M. Denon, and the splendid victories of the English in Egypt, have conspired to recommend these forms to recent imitation. In Paris and London we have Egyptian carpets, vases, tables, chairs; and a lady, after reposing on an Egyptian bed, may, perhaps, desire by her will, to become a charming mummy. As the work of M. Denon forms an important epoch in our knowledge of Egypt, especially its antiquities, it was thought proper to present this brief view of his travels.*

The ruling religion in Egypt is the Mahometan; but there are many Christian Copts who have their priests and monasteries. The government is at present unsettled, but will probably be abandoned to a Turkish Pasha; the aristocracy of the Beys and Mamluks being, in every ap-

PROGRES-
SIVE GEO-
GRAPHY.

Religion.
Government.

* The author of this work first remarked in a literary journal, (The Critical Review) that Santa-rish was only another name for Siwah, an observation which has since been adopted as his own by Rennell, who has very often used equal freedom with D'Anville. Monopolies of commerce may be allowed, but monopolies of science! The author must also do himself the justice to say, that he was the first who argued that Mr. Browne's Siwah was the site of the temple of Ammon, while Rennell insisted that Siwah was *Sirophim*.

GOVERN-
MENT.
Population.
Revenues.

pearance, eradicated by the French invasion. Mr. Browne estimates the population of Egypt at two millions and a half; of whom the city of Cairo may contain 300,000.* The revenue under the Beys might perhaps be about one million sterling.

Manners and
Customs.

A general similarity pervades the manners of Mahometan countries, as the Koran regulates most springs of human life: the fanaticism against the Franks or Europeans was extreme, but may perhaps be somewhat moderated by the recent terror of their arms. The Copts are an ingenious people, and have great skill in business; whence they are generally employed by the Mahometants as writers and accountants. The Mam-luks being extinct, the other chief class consists of Arabs or Mahometan descendants of these ancient conquerors. The heat of the climate enforces an abstemious diet: and the houses even at Cairo are mostly miserable dirty hovels. The common people are also disgustingly filthy in their persons; and the care which the women employ to cover their faces is truly ludicrous, as in general to disclose them would be the most effectual bar to temptation. But in the classes somewhat more at ease the Coptic women have interesting features, large black eyes; and, though of short stature, have often elegant shapes. The Coptic language is now only known in manuscripts, the Arabic being universally used.

Language.

M. Denon's idea of Egyptian manners is striking: "We do not here find, indeed, those long alleys which are the pride of the French gardens, nor the serpentine walks of the English, where health and appetite are the reward of the exercise required to survey them; but in the east, where indolent repose forms one of the chief luxuries, the tents or kiosks are pitched under the thick branches of a cluster of sycamores, and open at pleasure upon a fragrant underwood of orange and jasmine. To this is added the voluptuous nature of enjoyments, still, but imperfectly known to us, but which we may easily conceive; such as being attended by young slaves, who unite to elegance of form, gentle, and caressing manners; to be indolently stretched on vast and downy carpets, strewed with cushions, in company with some favourite beauty, breathing perfumes, and intoxicated with desires; to receive

* P. 71.

sherbet from the hands of a young damsel, whose languishing eyes express the contentment of willing obedience, and not the constraint of servitude. Surrounded with these delights, the burning African need not envy the inhabitant of Europe; and man may find happiness wherever there is beauty and grace, whether in the gardens of Trianon, or reposed on the banks of the Nile."

CITIES.

The chief city is Cairo, or in the oriental enunciation Kahira, which may indeed be regarded as the metropolis of Africa, as no city throughout this wide continent can perhaps boast a sixth part of its population. This celebrated metropolis is on the east side of the Nile, at some distance; but two suburbs connect it with the river. On the east is a ridge of that extensive chain, embanking the Nile as far as Upper Egypt. On the north a plain extends to the delta which it resembles in soil and productions. The population, as already mentioned, is estimated at 300,000; but the streets are narrow in order to guard against the sun; and there is an interior wide canal styled the Chalige, the stench of which is occasionally intolerable, though the chief street passes along its shore. The principal mosque is ornamented with pillars of marble, and Persian carpets, and has a library of manuscripts; great property being attached to the foundation. There are many reservoirs for water, public baths, and bazars or markets, where each trade has its allotted quarter. The houses are mostly of sand-stone from the mountain behind; and are sometimes three stories high with flat roofs. The harems, or apartments of the women, are expensively furnished; but those of the men neat and plain. Before the discovery of the Cape of Good Hope the commerce was immense; and Cairo is still the centre of that of eastern Africa, as Tripoli is of the western. From Yemen are imported coffee, drugs, odours, and some gems; muslin, cotton, spices from Hindostan: and the caravans from Sennaar and Fur bring slaves, gold dust, ivory, horns of the rhinoceros, ostrich feathers, gums, and drugs. From Tunis and Tripoli are brought oil, red caps, and fine flannel: from Syria, cotton, silk, soap, tobacco: from Constantinople, white slaves, Circassians or Georgians, the males being the noted Mamluks, with all kinds of brass, copper, and iron manufactures. Numerous negro slaves pass from Cairo to the more northern Mahometan countries.

Cities.
Cairo.

Among

sherbet

CITIES. Among the manufactures are sugar, sal ammoniac, glass lamps, salt-petre, gunpowder, red and yellow leather, and particularly linen made of the fine Egyptian flax. To the N. E. of the city are gardens and villas of the great; but the mountain is of white calcareous sand-stone, and destitute of verdure. On Friday a mosque without the walls is frequented by the ladies as a pilgrimage of pleasure. There are light boats, like Venetian gondolas, used on the increase of the Nile: and among the amusements are dancing girls, and rope dancers; the chief games being chess, and Polish draughts. On solemn occasions fireworks are exhibited.

Next in consequence are Alexandria, Rosetta or Raschid, and Damietta. Upper Egypt no longer boasts of a Thebes; and even Girgeh, formerly the capital of this part, begins to decline.

Commerce. Egypt is no longer the centre of oriental trade, nor the granary of Rome, yet the delta still exports great quantities of rice; and Upper Egypt supplies some cargoes of wheat. Flax is sent to Syria, and coffee, and black slaves, to Constantinople. Other articles of commerce are already enumerated in the description of Cairo. Alexandria was the chief seat of European trade, which thence passed by Raschid to Cairo. Particular exports were saffron and fenna; and about eight hundred bales of European broad cloth were imported. The trade of Damietta is of small consequence.

Climate. The climate of Egypt is well known to be peculiar, rain being a most uncommon phenomenon. The heat is also extreme, particularly from March to November; while the cool season or a kind of spring extends through the other months.³ Yet the chief malady seems to be a weakness of the eyes, and blindness is very common in Egypt. Some suppose that this proceeds from the extreme heat and want of rain, so that the air is continually impregnated with very fine dust; and the soil abounding in nitre, the effect is the more acrimonious. The habit of sleeping in the open air, upon the terraces, exposed to the nocturnal dews, may however be regarded as the chief cause; and when the disease appears it is increased by the splendour of the sun, reflected from the white houses, and the pale sand of the deserts. The plantation of

³ Volney, i. 67.

trees and shrubs, wherever it can be effected ; and the universal intro- CLIMATE.
duction of green paint, would in some measure obviate this calamity,
which appears to have been unknown to the ancient inhabitants : but the
chief precaution would seem to be an edict against sleeping in the open
air ; and the use of such covers as the Laplanders wear against the glare
of the snow might also be salutary. The pestilence has been errone-
ously supposed to originate from Ethiopia, where it is quite unknown ;
and in Egypt it is supposed to be always imported from Constanti-
nople. The extreme heat stops it here, as effectually as the cold in
other countries.

The general face of the country varies in particular regions, but is Face of the
otherwise rather flat and uniform. Alexandria is insulated in the de- country.
sert, while the delta presents a luxuriant vegetation, and inundated
meadows. The constant repetition of the palm and the date tree be-
comes tedious ; but around Raschid the orange groves present an
agreeable variety. Of far the greater part of Egypt the aspect is that
of a narrow fertile vale, pervaded by the Nile, and bounded on either
side by barren rocks and mountains. The towns and cultivation are
chiefly on the eastern bank ; behind which are vast ranges of mountains
extending to the Arabian gulf, abounding with marble and porphyry,
but almost destitute of water, and only inhabited by Bedouins. Across
these mountains is a solitary road to Cosseir on the Red Sea. On the
west the hills lead to a vast sandy desert, where are the two Oases, a
name applied to islands situated in sand. The appearance of Egypt,
under the inundation of the Nile, has been described rather poetically
than historically, the picture only applying to parts of the delta ; while
in other districts there are some canals, but the lands are generally
watered by machines. According to a late traveller " the soil in general
is so rich as to require no manure. It is a pure black mould, free from
stones, and of a very tenacious and unctuous nature. When left un-
cultivated I have observed fissures, arising from the extreme heat, of
which a spear of six feet could not reach the bottom."* From Cairo to
Assuan, or Syene, a distance of about 360 miles, the banks, except

* Browne, p. 64.

FACE OF THE
COUNTRY.

where rocks appear, present no native plant, but rise as it were in steps, as the Nile has in different ages worn its way, and are sown with various esculent vegetables. The agriculture is of the simplest kind, the chief article being wheat with barley for the horses; oats being scarcely known in Asia or Africa. In the delta rice is the chief grain, with maiz and lentils; nor are some kinds of clover unknown. The lands chiefly belong to the government or to the mosks. The tenants are not restricted to the soil; but are at liberty to move on the expiration of a kind of lease.

Rivers.
Nile.

The only river of Egypt is the Nile, already described in the general view of Africa. Its greatest breadth, even here, is about one-third of a mile; and the depth about twelve feet: for receiving no streams, in Egypt or the Nubian deserts, it bears little of the usual character of rivers that pervade so extensive a course. The water is muddy, when it overflows of a dirty red; and cloudy even in April and May. The river begins to rise about the 19th of June, the Abyssinian rains having begun in April; and it ceases in October. It abounds with fish, particularly kinds of salmon and eels. The hippopotamus is unknown in Egypt; and even the crocodile restricted to the south of Assiut.

Lakes.

There are several extensive lakes in the northern parts of Egypt, the largest being that of Menzala which communicates with the sea by one or two outlets. Next is that of Berelos, followed by that of Etko. These stagnant waters at the mouths of the Nile seem unknown to Ptolemy, and to have been produced, or enlarged, by the sandy depositions of the river having raised the bed of the sea, so that the delta is diminishing, instead of being increased as some recent theories affirm. The lake of Mareotis, on the south of Alexandria, has however become almost dry; though occasionally, as would seem, moistened by inlets from the sea. * The lake called Kerun, in a curious district of Egypt forming an excrescence to the west, seems to be about thirty miles in length and six miles in breadth; and has no appearance of being artificial as some suppose, the Mœris of antiquity being probably the Bathen, a long deep canal to the S. E. The Natron lakes must not be forgotten,

* Mr. Baldwin, Recollections, 1801, 1800. p. 185. mentions the haze and vapour always floating over this exhaling lake: but p. 203 he says the lake of Mareotis is dry.

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use of barilla. They are situated in the desert near a remarkable chan-
nel, supposed to have been anciently a branch of the Nile, and still
called the Bahr Belame, or river without water; but it was probably
an outlet of the lake of Kerun, in remote ages, before the deserts had
become so extensive; for there seems little doubt that they increase; and
it is probable that when Egypt boasted her early power, the mountains
were clothed with vegetation, and the Nile a far superior stream.

The mountains have been already described as ranging along the ^{Mountains.}
banks of the Nile, but chiefly between that river and the Red Sea. In
Lower Egypt, and on the western side of the Nile, they seem to be
chiefly of calcareous sand-stone, or what is called free-stone; some per-
haps are of argillaceous and siliceous sand-stone. The pyramids are ge-
nerally constructed of, a soft calcareous free-stone, full of shells, like that
used at Bath; and the rock on which they stand is of the same sub-
stance. In Upper Egypt the mountains towards the Red Sea are por-
phyreous and granitic. On passing towards Cossair the rugged and
lofty rocks have a grand and terrific appearance, consisting chiefly of
red granite, and porphyry red and green, the latter being the ophite or
snake-stone of the ancients, by a far more proper appellation, as the
word *porphyry* implies red or purple. Near Syene Pococke observed the
quarries of red granite, whence the ancient obelisks were dug; their
great length being hollowed out from the rock, in the form of steps, for
the convenience of working, and easy carriage to the Nile.

The rich valley of the Nile has been for so many ages under the domi- ^{Botany.}
nion of man, and can boast the proud succession of so many hundred
harvests, that it is by no means easy to distinguish its native vegetables
from those which have been introduced at various periods for profit or
pleasure, and have gradually naturalized themselves in the soil of Egypt.
Wherever the annual inundations extend, a number of seeds, brought
down by the torrent from Ethiopia and Abyssinia, must be deposited
together with the fertilizing mud, which, vegetating regularly every year,
are probably mistaken for truly indigenous plants. We shall therefore

¹ Browne, 173.

BOTANY.

mention such of the Egyptian vegetables as are of most importance, either by their present use or ancient fame, without being very solicitous to examine whether they are real natives or naturalized strangers.

The Lotus and Papyrus have always been the appropriate decorations of the God of the Nile: the former of these is a species of *Nymphaea* or water lily, which at the retreat of the inundation covers all the canals and shallow pools with its broad round leaves, among which are its cup-shaped blossoms of pure white, or cerulean blue, reposing with inimitable grace on the surface of the water. The Papyrus, sacred to literature, after having long vanished from the borders of the Nile, has at length been again recognized in the *cyperus papyrus* of the Linnæan system. The *arum colocasia* of ancient fame is still cultivated in Egypt for its large esculent roots. The Egyptian Sycamore (*Ficus sycomorus*), probably introduced from the opposite shore of Arabia, is of peculiar value from its fruit, its depth of shade, and the vigour with which it grows, even on the sandy frontiers of the desert. The Date Palm, the Pistachia, the oriental Plane, and the Bead tree, adorn the shore, and are cultivated in the vicinity of most of the towns. The cypress overshadows the burial grounds, and the caperbush roots itself in the ruins of Egyptian, Greek, and Roman civilization. The fenna, the *Mimosa nilotica*, and the Henné (*Lawsonia inermis*), are also characteristic of Egypt; from the latter of these, the women prepare that yellow dye with which they tinge the nails of their fingers. All the most exquisite of the European fruits, such as the Almond, the Orange, Pomegranate, Fig, Peach, and Apricot, are cultivated here with great assiduity and success; the various kinds of Melons and Gourds grow to full perfection, and compose no unimportant portion of the food of the inhabitants; and mingled with these productions of the temperate regions are found the Plantain, the Sugar-cane, the Cotton, and a few others, that have formerly been imported hither from the Tropical climates. *

ZOOLOGY.

The animals of Egypt have been repeatedly described. A French naturalist seems recently to have demonstrated from the size of the bones, and other circumstances, that the noted ibis of the ancients was not a kind of stork, as commonly conceived, but a curlew. The bird has

* Forskal, Fl. Ægypt.—Arab. Sonnini—Volney—Browne.

not often been seen by modern travellers, having partly deserted the country, from the failure of some food, or other cause. The mineralogy of Egypt is not opulent, nor does it seem ever to have produced any of the metals. A mountain towards the Red Sea is styled that of emeralds; and even now the best emeralds are by the Persians called those of Said, or Upper Egypt: but the mines are no longer worked, and even the spot seems unknown.* Wad has published an account of Egyptian fossils, from ancient fragments in the museum of Cardinal Borgia at Velletri. They are of red granite; white granite with hornblende; grey felspar, and black hornblende.† The porphyry seems petrosilex with spots of felspar. There is also a little fragment, with hieroglyphics, of micaceous schistus, consisting of brownish black mica: other remains are of sand-stone, and sand-stone breccia, felspar, serpentine, lapis ollaris, white marble with veins of silver mica, swine-stone, what is called green basalt by the Italians, and jasper of various kinds: with topaz, or the chrysolite of the ancients, amethyst, rock crystal, calcedony, onyx, carnelian, heliotrope, obsidian, lazulite; but there seem to be none of emerald. Many are of basalt, or the Ethiopic stone of Herodotus and

* In the travels of Mr. Bruce there are severable valuable articles of new and authentic information, which might have been presented to the public in a small volume or two. But, in a spirit of universal compilation, he has disgraced his work with innumerable gross errors. Dr. Vincent has observed, that he has even confounded the gulf of Persia with the Red Sea; and Gossellin has added, that he has confounded the isle of Topazes (those of the ancients were yellow green, Pliny, 37. 8.) with the mountain of emeralds. Hence his ideas concerning the emeralds of the ancients are beneath notice. The ancient emeralds were confessedly harder than those of Peru, but those from Ceylon are thought to be green sapphires, the hardness being 16, while the Peruvian emerald is 12 (diamond 20.) Pliny 37. 5. classes the emerald next to the pearl and diamond; and says they were seldom or never engraved, to avoid injuring their beauty; but the hardness of the Scythian above Bactria, as he explains, that is from the Imaus; and of the Egyptian; was such that they could not be cut. *Quapropter decreto hominum iis parcutur, sculpi vetitis. Quamquam Scythicorum Ægyptiorumque duritia tanta est, ut nequeant vulnerari.* Lib. 37. cap. 5. It further appears from this description that the idea concerning the superiority of the emeralds of Peru, in fact of New Granada, is wholly erroneous.

† This he says is the *Syenites* of Werner, an absurd appellation, for Pliny tells us that the *syenites* was a red stone. It is in fact only an ancient name for red granite; but mineralogists are rarely versed in erudition. Ogilby in his *Africa*, 1671, fol. p. 97, gravely informs us, that the red (felspar) denotes fire; the crystalline (quartz) air; the bluish opaque (quartz) water; and the black (mica) earth; so that in their obelisks of granite the Egyptians comprised symbols of the four elements.

Strabo;

MINERALOGY.

Strabo; Pliny adding that the native word means *iron*: the Egyptian is sometimes a grunsten, being black hornblende with veins of felspar; and particles of hornblende are visible in all these basalts. These notices become interesting, as the Egyptians were the first inventors of sculpture and architecture, and the original materials may justly excite curiosity.*

Of the mineralogy of Egypt M. Roziere, who accompanied the French expedition, along with Dolomieu, and after the departure of that great man was charged with that important branch of science, will no doubt give a most ample and satisfactory account, in the large description of Egypt, about to be published by the French government. Mean while he presented to me, for this work, the following short extract, which shall be literally translated.

"The lower part of Egypt, or the Delta, is incontestably produced by the periodical inundations of the Nile. The remainder, or Upper Egypt, is only a vast valley, in the bottom of which the river serpentine. This valley in the direction of N. to S. pierces towards the interior of Africa, to half a degree below the tropic, where it is interrupted by a range of large rocks, which traverse the Nile, forming the first cataract, a natural boundary between Egypt and Nubia.

"The breadth of this long valley varies considerably, but never exceeds five or six leagues, and for the most part is confined to two or three; nay at some points of the upper part, the Nile completely occupies it, and bathes both the bordering chains of mountains.

"The bottom of the valley is entirely formed, like the Delta, of that argillaceous mud, which the Nile brings down during the inundations; but the border of the land, then submersed by the waters, is an arid soil, sometimes sandy, sometimes wholly formed from the decay of the neighbouring mountains.

"The two long chains of mountains, which confine the valley, are both of a calcareous nature in the northern part. It is only about

* The *verde antico*, according to Strabo, was found in Mount Taygetus of Laconia, and according to Pausanias in a village called Crocei; and it greatly resembled that of Thessalia. This is asserted by Caryophilus, and Mercator *de gli Obelischi*, as quoted by La Lande, Italy, vi. 200. I cannot find the passages.

twenty leagues from the cataract, a little above the town of Esneh, that the calcareous mountains cease, and are followed by free stone beds. These sand stones present frequent variations, prevailing for about twenty leagues, and terminating towards Syene and Elephantina, where the territory becomes primitive and chiefly granitic.

MINERA-
LGY.

" These two chains are constantly of the same nature in their corresponding parts ; but they sometimes differ in their aspect. Those on the right hand, or the eastern chain, frequently present, towards the vale of Egypt, abrupt precipices, resembling long walls, and approaching near to the banks of the river. It terminates suddenly above Cairo. Considered in its whole extent it bears the name of the Arabian Chain, because it reaches even to the Red Sea ; but the part near Cairo is called by the Egyptians, Mokattam, that is to say, the Cut Mountain ; either on account of its abrupt precipices, or of the grottos and quarries observable on all sides.

" In the Libyan Chain the geology varies very little, even after a considerable progress into the deserts. But in the Arabian Chain there is a variety of rocks, above all in the southern part. It abounds in granites, porphyries, traps, petrosilices, and pudding stones of different kinds. Here is also found that beautiful sort of breccia used in the arts by the ancient Egyptians, and known at Rome under the name of green breccia of Egypt ; or universal breccia, from the number of primitive stones which appear in fragments in this singular rock.* Another very remarkable kind of breccia, which I found in the Arabian Chain, and in the isthmus of Suez, consists of silicious fragments of all sizes, and serves as a bed to those curious pebbles presenting, when cut, portraits, ruins, trees, &c. well known by the name of Egyptian pebbles. This bed was observed for the first time in the Valley of Wanderings, which ends at a short distance from Suez. The same pudding stone also contains agates. The ancient Egyptians employed it much ; and among other objects they formed of it the celebrated colossus of Memnon, which formerly rendered sounds at the rising of the sun, if we believe the multitude of Greek and

* This breccia, being often green, has been confounded by Mr. Bruce with the *verde antico*, which is of a totally different nature, being a mixture of marble and serpentine, found in Laconia, and near Theffalonica. P.

Latin

MINERALOGY.

Latin inscriptions with which it is loaded. Hence we may perceive that this phenomenon could not be ascribed to the nature of the stone, as some naturalists have supposed.

"Egypt does not appear ever to have been rich in metals, yet a little iron is found, and manganese towards Arabia.*

"I found in the mountain of Baram, beyond the cataracts, ancient mines of lead and copper, formerly explored by the Egyptians; and in the neighbourhood some ruins of furnaces.

"In various parts of Egypt garnets are discovered, forming as it were a constituent part of the granites. Talc is abundant; and numerous kinds of Lapis ollaris.†

"I found a considerable number of new fossils, and many kinds of petrified wood. It has been long since known that the petrifications, so abundant at the bottom of the pyramids, and regarded by the ancients as grains of petrified wheat or barley, are only *camerines*, the stone being called by some the lenticular."

Besides the Natron Lakes, there are some mineral springs, and one of salt water near Cairo, which is supposed to have medical virtues. The whole country may be regarded as one natural curiosity.

Nubia.

BETWEEN Egypt and Abyssinia is an extensive tract, about 600 miles in length, and 500 in breadth, by the ancients styled Ethiopia, but more precisely by the Arabian geographers called Nubia. The isle of Meroe was formed by the junction of the Astaboras with the Nile; and it is not improbable that a southern channel, described by Ptolemy, may since have been dried up by the encroaching desert. The greatest part of Nubia is occupied by wide deserts on the east and west: but on the Nile are two states of some little consequence, Dongola on the north, and Sennaar on the south. Sennaar was in a state of servile war, the slaves having usurped the government, when Mr. Browne visited Darfur. Bruce describes his interview with the king, or rather

* It is now known that the Egyptians possessed the modern art of colouring glass with manganese, as I am assured by an eminent chemist. P.

† Some suppose this to be the *lapis thebaicus* of the ancients. P.

chief,

chief, and his distinguished haram. In August and September the country around the city presents a pleasant verdure: but the people are deceitful and ferocious. The general dress is a long blue shirt; and the food mostly millet, though there be no want of cattle. Dongola does not merit a description: and the whole of Nubia is a miserable country, inhabited by a miserable people.*

Mr. Bruce thus describes his visit to the haram of the sultan of Sennaar.

"About four o'clock that same afternoon, I was again sent for to the palace when the king told me that several of his wives were ill, and desired that I would give them my advice, which I promised to do without difficulty, as all acquaintance with the fair sex had hitherto been much to my advantage. I must confess, however, that calling these the fair sex is not preserving a precision in terms. I was admitted into a large square apartment, very ill lighted, in which were about fifty women, all perfectly black, without any covering but a very narrow piece of rag about their waists. While I was musing whether or not these all might be queens, or whether there was any queen among them, one of them took me by the hand and led me rudely enough into another apartment. This was much better lighted than the first. Upon a large bench, or sofa, covered with blue Surat cloth, sat three persons clothed from the neck to the feet with blue cotton shirts.

"One of these who, I found was the favourite, was about six feet high, and corpulent beyond all proportion. She seemed to me, next to the elephant and rhinoceros, the largest living creature I had met with. —Her features were perfectly like those of a negro; a ring of gold passed through her under lip, and weighed it down, till, like a flap, it covered her chin, and left her teeth bare, which were very small and fine. The inside of her lip she had made black with antimony. Her ears reached down to her shoulders, and had the appearance of wings; she had in each of them a large ring of gold, somewhat smaller than a man's little finger, and about five inches diameter. The weight of these

* See the Travels of Poncet, a French physician, 1698, in Lockman's Travels of the Jesuits, l. 192. Near Sennaar were forests of acacia, full of paroquets. The trees, p. 203, seem to be the cotton trees of America.

had drawn down the hole where her ears was pierced so much, that three fingers might easily pass above the ring. She had a gold necklace, like what we used to call esclavage, of several rows, one below another, to which were hung rows of sequins pierced. She had on her ankles two manacles of gold, larger than any I had ever seen upon the feet of felons, with which I could not conceive it was possible for her to walk, but afterwards I found they were hollow. The others were dressed pretty much in the same manner; only there was one that had chains, which came from her ears to the outside of each nostril, where they were fastened. There was also a ring put through the gristle of her nose, and which hung down to the opening of her mouth. I think she must have breathed with great difficulty. It had altogether something of the appearance of a horse's bridle. Upon my coming near them, the eldest put her hand to her mouth, and kissed it, saying, at the same time, in very vulgar Arabic, "Kifhalek howaja?" (how do you do, merchant.) I never in my life was more pleased with distant salutation than at this time. I answered, "Peace be among you! I am a physician, and not a merchant."

"I shall not entertain the reader with the multitude of their complaints; being a lady's physician, discretion and silence are my first duties. It is sufficient to say, that there was not one part of their whole bodies, inside and outside, in which some of them had not ailments. The three queens insisted upon being blooded, which desire I complied with, as it was an operation that required short attendance; but, upon producing the lancets, their hearts failed them. They then all cried out for the Tabange, which, in Arabic, means a pistol; but what they meant by this word was, the cupping instrument, which goes off with a spring like the snap of a pistol. I had two of these with me, but not at that time in my pocket. I sent my servant home, however, to bring one, and, that same evening, performed the operation upon the three queens with great success. The room was overflowed with an effusion of royal blood, and the whole ended with their insisting upon my giving them the instrument itself, which I was obliged to do, after cupping two of their slaves before them, who had no complaints, merely to shew them how the operation was to be performed.

"Another

" Another night I was obliged to attend them, and gave the queens, and two or three of the great ladies, vomits. I will spare my reader the recital of so nauseous a scene. The ipecacuanha had great effect, and warm water was drunk very copiously. The patients were numerous, and the floor of the room received all the evacuations. It was most prodigiously hot, and the horrid black figures, moaning and groaning with sickness all around me, gave me, I think, some slight idea of the punishment in the world below. My mortifications, however, did not stop here. I observed that, on coming into their presence, the queens were all covered with cotton shirts; but no sooner did their complaints make part of our conversation, than, to my utmost surprise, each of them, in her turn, stripped herself entirely naked, laying her cotton shirt loosely on her lap, as she sat cross-legged like a tailor. The custom of going naked in these warm countries abolishes all delicacy concerning it. I could not but observe that the breasts of each of them reached the length of their knees.

" This excessive confidence on their part, they thought, merited some consideration on mine; and it was not without great astonishment that I heard the queen desire to see me in the like dishabille in which she had spontaneously put herself. The whole court of female attendants flocked to the spectacle. Refusal, or resistance were in vain. I was surrounded with fifty or sixty women, all equal in stature and strength to myself. The whole of my clothing was, like theirs, a long loose shirt of blue Surat cotton cloth, reaching from the neck down to the feet. The only terms I could possibly, and that with great difficulty, make for myself were, that they should be contented to strip me no farther than the shoulders and breast. Upon seeing the whiteness of my skin, they gave all a loud cry in token of dislike, and shuddered, seeming to consider it rather the effects of disease than natural. I think in my life I never felt so disagreeably. I have been in more than one battle, but surely I would joyfully have taken my chance again in any of them, to have been freed from that examination. I could not help likewise reflecting, that, if the king had come in during this exhibition, the consequence would either have been impaling, or stripping off that skin whose colour

they were so curious about ; though I can solemnly declare there was not an idea in my breast, since ever I had the honour of seeing these royal beauties, that could have given his majesty of Sennaar the smallest reason for jealousy ; and I believe the same may be said of the sentiments of the ladies in what regarded me. Ours was a mutual passion, but dangerous to no one concerned. I returned home with very different sensations from those I had felt after an interview with the beautiful Aiscach of Icawa. Indeed, it was impossible to be more chagrined at, or more disgusted with my present situation than I was, and the more so, that my delivery from it appeared to be very distant, and the circumstances were more and more unfavourable every day.”*

The same traveller offers the following remarks on the town of Sennaar.

“Sennaar is in lat. $13^{\circ} 34' 36''$ north, and in long. $33^{\circ} 30' 30''$ east from the meridian of Greenwich. It is on the west side of the Nile, and close upon the banks of it. The ground whereon it stands rises just enough to prevent the river from entering the town, even in the height of the inundation, when it comes to be even with the street. Poncet says, that when he was at this city, his companion, father Brevedent, a Jesuit, an able mathematician, on the 21st of March, 1699, determined the latitude of Sennaar to be $13^{\circ} 4'$ N. the difference, therefore, will be about half a degree. The reader, however, may implicitly rely upon the situation I have given it, being the mean result of above fifty observations, made both night and day, on the most favourable occasions, by a quadrant of three feet radius, and telescopes of two, and sometimes of three feet focal length, both reflectors and refractors, made by the best masters.

“The town of Sennaar is very populous, there being in it many good houses, after the fashion of the country. Poncet says, in his time, they were all of one story high, but now the great officers have all houses of two. They have parapet roofs, which is a singular construction ; for in other places, within the rains, the roofs are all conical. The houses

* Bruce's Travels, vol. vi. p. 361. 8vo.

are all built of clay, with very little straw mixed with it, which sufficiently shews the rains here must be less violent than to the southward, probably from the distance of the mountains. However when I was there, a week of constant rain happened, and on the 30th of July the Nile increased violently, after loud thunder, and a great darkness to the South. The whole stream was covered with wrecks of houses, canes, wooden bowls and platters, living camels and cattle, and several dead ones passed Sennaar, hurried along by the current with great velocity. A hyæna, endeavouring to cross before the town, was surrounded and killed by the inhabitants. The water got into the houses that stand upon its banks, and by rising several feet high, the walls melted, being clay, which occasioned several of them to fall. It seemed, by the floating wreck of houses that appeared in the stream, to have destroyed a great many villages to the southward towards Fazaclo.

"The soil of Sennaar, as I have already said, is very unfavourable both to men and beast, and particularly adverse to their propagation. This seems to me to be owing to some noxious quality of the fat earth with which it is every way surrounded, and nothing may be depended upon more surely than the fact already mentioned, that no mare, or she-beast of burden, ever foaled in the town, or in any village within several miles round it. This remarkable quality ceases upon removing from the fertile country to the sands. Aira, between three and four miles from Sennaar, with no water near it but the Nile, surrounded with white barren sand, agrees perfectly with all animals; and here are the quarters where I saw Shekh Adelan, the minister's horse, (as I suppose, for their numbers), by far the finest in the world, where in safety he watched the motions of his sovereign, who, shut up in his capital of Sennaar, could not there maintain one horse to oppose him.

"But however unfavourable this soil may be for the propagation of animals, it contributes very abundantly both to the nourishment of man and beast. It is positively said to render three hundred for one, which however confidently advanced, is, I think, both from reason and appearance, a great exaggeration. It is all sown with dora, or millet, the principal food of the natives. It produces also wheat and rice, but these at Sennaar are sold by the pound, even in years of plenty. The salt made

use of at Sennaar is all extracted from the earth about it, especially at Halfaia, so strongly is the soil impregnated with this useful fossil.*

The chief boast of this country is the breed of horses. "What figure the Nubian breed of horses would make in point of fleetness is very doubtful, their make being so entirely different from that of the Arabian; but if beautiful and symmetrical parts, great size and strength, the most agile, nervous, and elastic movements, great endurance of fatigue, docility of temper, and seeming attachment to man beyond any other domestic animal, can promise any thing for a stallion, the Nubian is, above all comparison, the most eligible in the world. Few men have seen more horses, or more of the different places where they are excellent, than I have, and no one ever more delighted in them, as far as the manly exercise went. What these may produce for the turf is what I cannot so much as guess; as there is not, I believe, in the world, one more indifferent to, or ignorant of that amusement than I am. The experiment would be worth trying in any view. The expence would not be great, yet there might be some trouble and application necessary, but, if adroitly managed, not much even of that.†"

MAHOMETAN STATES IN THE NORTH.

TRIPOLI.—TUNIS.—ALGIER.—MOROCCO.

City of
Tripoli.

THESE are Tripoli, Tunis, Algier, and Morocco. Of these Tripoli is the most extensive, and the least known. The territories reach from the gulph of Cabes, the lesser Syrtis of antiquity, to the confines of Egypt, being chiefly the Africa Proper, and Lybia of the ancients;

* Bruce's Travels, vi. 381.

† Bruce's Travels, vi. 430.

but a great part is desert. Tripoli does not appear to be ancient, the TRIPOLI. nearest situations being the Sabatra and Oea of antiquity, while perhaps Tripoli is the port of Pisidon of Ptolemy.* The metropolis of Arabian Africa was Cairoan, about fifty miles to the S. of Tunis, where resided the governors appointed by the Califs of Damascus: and about the year 800 they assumed royal authority, and the dynasty of the Fatimites passed from Africa to Egypt. The Zeirites afterwards reigned at Cairoan. Tripoli was besieged by the Egyptians, A. D. 877. and A. D. 1050. In 1146 it was seized by the Normans from Sicily, who held this coast till 1159. The power of the Turks is recent, only dating from 1514, when Barbarossa seized Algier; but it was continued more peculiarly at Tripoli,† where the Bey was considered as immediately subject to the Porte, a Turkish Pasha superintending his conduct; and the combined taxations have effectually ruined the country. Famine is also no unusual circumstance; and the depredations of the Arabs form an additional calamity. The town of Tripoli is in a low situation, but to the S. are plantations of date trees and verdant hills, which relieve the tameness of the scene. It is in a state of rapid decay, scarcely four miles in circumference, and thinly peopled; the ancient castle, though still the residence of the reigning family, being in a ruinous condition. At present the Bey seems to be honoured or disgraced with the title and functions of Pasha; while the Prince's eldest son has the title of Bey. Even the tributary Arabs are often in a state of insurrection; and the month of December, when the grass begins to present sufficient forage, is a common season of warfare. There are olive and date trees, white thorn, and Spanish broom; but the fields of grain are few and scanty. Towards Mesurata the vegetation is more luxuriant; but of the ancient Cyrene, an interesting spot, there is no recent account.

* It was built after the age of that geographer, but is mentioned as the birth-place of the emperor Severus. The name according to D'Anville was originally that of the province, as containing three cities. When the Arabs entered Africa in the seventh century they encountered considerable resistance at Tripoli. See Gibbon ix. 450.

† The emperor Charles V. took Tripoli, and resigned it to the knights of Malta, who soon lost this possession, but their proximity has stifled the piracy of the Tripolitans. In 1686 this city was humbled by the bombardment of a French fleet, and sent an embassy of submission to Louis XIV.

‡ Lucas in the Proceedings of the African Society, 1790, 4to. p. 43.

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TUNIS.

Next on the west is Tunis, the central region of northern Africa, the western part of the proper Africa of antiquity, and formerly the chief seat of Carthaginian power. In the middle ages Tripoli was subject to Tunis, which was seized by Barbarossa in 1533. Of this kingdom, as it is called, Dr. Shaw has given a good description, having travelled through the greater part of it; and it is to be regretted that he did not visit Tripoli, still an obscure region in geography. In the summer the Bey of Tunis resides in the northern part, and in winter retires to the south, where there is a lake of considerable extent, the Palus Tritonis of antiquity. The chief river is the Mejerda, the Bagrada of classical repute. The chain of Atlas seems here to terminate, in Cape Bon, being called the mountains of Megala, Uzelett, &c.: but our author's chief pursuit being antiquities, the natural objects are treated with less care. Among the mineral productions he has observed alabaster, crystal, boles, plum-bago, iron, lead. The cattle are small and slender, and the horses have degenerated. The sheep of Zaara are as tall as fallow deer. There are lions, panthers, hyenas, chakals, and other ferocious animals. The manufactures are velvets, silks, linen, and red caps worn by the common people. In general the Tunifians are renowned as the most polite and civilized among the Mahometans of Africa, a character for which they are probably indebted to the situation of their country, for many ages the seat of the chief African powers. The ruins of Carthage, not far to the N. E. of Tunis, have been accurately illustrated by Dr. Shaw*. The town of Tunis is about three miles in circumference, containing about ten thousand houses, or perhaps 50,000 souls. The chief exports seem to be woollen stuffs, red caps, gold-dust, lead, oil, Morocco leather: and the commerce with France was considerable. †

Algier

* This city was founded about 1250 or 1300 years before the birth of Christ, as appears from Herodotus and the Parian Chronicle.

† "The kingdom of Tunis, according to Desfontaines, begins in the east, at the isle of Gerbi, and terminates in the west at the river Zaino, also called Tusca or Susca. The southern part is sandy, little mountainous, barren, and parched by a burning sun; that near the sea is rich in olive trees, and presents a great number of cities and populous villages. But the western part is filled with mountains and hills, watered with numerous rivulets, the environs of which are extremely fertile, and produce the finest and most abundant crops. Even the river of Mejerda is not navigable in the summer. The soil is in general impregnated with marine salt, and nitre, and springs of fresh water are more rare than salt.

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“Bruns

Algier may be regarded as the last Mahometan state on the Mediter- ALGIER.
 ranean, for Morocco is chiefly extended along the Atlantic. In the
 thirteenth century Africa was first divided into those petty royalties,
 which still subsist with few variations. In 1514 Barbarossa seized Al-
 gier, which afterwards became a noted seat of pirates; and one of the
 Deys candidly declared that the country was a nest of robbers, and he
 was their chief. This city is supposed by Shaw to be the ancient Ico-
 sium, and is not above a mile and a half in circuit, while the inhabi-
 tants are exaggerated to more than a hundred thousand: but probably
 half that number would be nearer the truth. It is ludicrous to behold
 this power exacting tribute from the maritime states of christendom, while
 two ships of war, maintained at the general expence, might block up
 the port, and extinguish the claims and the piracy. The antiquities of
 this kingdom have been accurately examined by Dr. Shaw, whose work
 is however more full of erudition, than of solid and interesting know-
 ledge. The chief river is the Shellif, rising from the northern side of
 the Atlas, as the Wal Jedi from the southern, and afterwards bending
 to the West, being the Chinala of antiquity, while the latter is the Za-
 bus. The kingdom of Algier chiefly comprises the Numidia and part

“Bruns (Afrika, vi. 312.) on the authority of Sprengel, reckons at Tunis 12,000 houses, and
 300,000 or 200,000 inhabitants, of whom more than the half perished by the plague of 1789;
 but this number seems much exaggerated.

“Gadames (ibid.) had formerly a flourishing commerce: but it has ceased since the caravans
 passing from Tripoli to Tombouctou do not stop there, but at Agadez. The caravans of Tombuc-
 tou bring slaves, ostrich feathers, ivory, amber; those of Sallee, gold, as well as those of Gadames,
 which also bring negro slaves. As at Algiers, the population of Tunis consists principally of Turks,
 or their posterity; a mixture of Moors, Kabils, or indigenal inhabitants of the mountains; rene-
 gadoes, Jews, negro slaves, and free and enslaved Christians.

“Tunis is governed by a single bey, and is not divided into different provinces, as Algiers and
 even Tripoli.

“Ruins of ancient monuments are found near Zowan, Spitala, Cassa, Paradise, Hammamet,
 Chafpa: Desfontaines (Flora Atl.) mentions in particular with admiration, a large and beautiful
 amphitheatre near Elgem. Some vestiges are also found here and there of an ancient Carthagi-
 nian aqueduct, which served to draw water from the springs of Mount Zowan; but there scarcely
 exist any other remains of Carthage. Near the river Mejerda, called Bagrada by the ancients, are
 still seen some ruins of Utica, which are, at present, at the distance of about four thousand fathoms
 from the shore, though this city was formerly a sea-port.” Walckenaer's Notes on this Geogra-
 phy, Fr. Ed. vi. 350.

“Shaw, p. 68.

ALGIER: of the Mauretania of the ancients, being bounded on the S. by Getulia, and the chains of the Atlas, called Lowat and Ammer; which are however by Shaw's account of small elevation, and the grand ridges of the Atlas are towards the west, in the kingdom of Morocco.* The mountain of Jurjura is the highest in Barbary, being about eight leagues in length, in a N. E. and S. W. direction, full of rocks and precipices, but only covered with snow during the winter. This mountain is about 60 B. miles to the S. E. of Algier, and perhaps forms a part of the real Atlantic chain, which in this direction will terminate more to the west than above supposed; but it at any rate expires in gentle elevations, though the sea coast from the river Booberik to near Bona be mountainous and rocky. The productions are in general the same with those of Tunis. There are many salt rivers and springs, and there is a mountain of salt near the lake, called Marks: † there are likewise several mineral springs; and earthquakes are not unknown.

Morocco.

Of the empire, or rather kingdom, of Morocco, an interesting account has lately been published by an English traveller, who from his medical character, had access even to the harems of the king, and one of the princes. This nominal empire consists indeed of several small kingdoms, as the old English monarchy was composed of the seven kingdoms of the heptarchy; but the style of emperor seems to have arisen in the fourteenth century, when the Sultan of Morocco was for a short time sovereign of all the northern states of Africa. The proper style is that of sharif, or sheref, derived from a supposed descendant of Mahomet, who seized the sceptre about the year 1500. The kingdom of Fez has been united to Morocco, since it first became an independent sovereignty in the thirteenth century; while that of Tremefin was joined to the deydom of Algier. The sovereigns of Morocco being of the house of Merini, they were styled Al Merinis, and corruptly by the Spaniards, and other authors, kings of Balmerin, being latterly the most

* Between cape Spartel and Arzilla the inland mountains are observed from the sea, covered with snow even in May. Sail. Dir. p. 1.

† What the Moors call *Shott* or *Shatt* is a sandy plain, but sometimes overflowed, and which receives five small rivers. Shaw, 114. It is to be regretted that this author was so zealous an antiquary, whence his work is chiefly valuable for the illustration of ancient geography. The petrifying spring, ib. 232. led the fabling Arabs to imagine cities and their inhabitants turned into stone.

powerful of the African princes. In the hands of an industrious people Morocco. the kingdom of Morocco, or ancient Mauretania, might still be of considerable importance; but from ignorance and want of policy, the western harbours are, by Mr. Lempriere's report, blocked up with sand, so that Morocco may be effaced from the list of maritime powers or pirates. There are heaths of great extent; and the ridge of Atlas here displays its lofty summits and most extensive wildness; but many districts are fertile, particularly that of Tafilet on the S. E. side of the Atlantic ridge. * In the summer months the heat is tempered by breezes from the Atlas, always clothed with snow. The Moors of the towns are somewhat civilized, particularly the mercantile class, and the wandering Arabs hospitable, but the Brebes or Brebers, who gave name to Barbary, are a fierce and obstinate race of the ancient natives; and, secure in the mountainous recesses, defy the government, being chiefly ruled by elective sheiks. The universal food is *coccosu*, consisting of bits of paste about the size of rice crumbled into an earthen colander, and cooked by the steam of boiled meat and vegetables, which are all served up together in an earthen dish, with butter and spices. This stew, in which nothing is lost, even the steam being received by the paste, is the favourite meal of the peasant and the monarch. The domestic animals are much the same as those of Europe, except the camel; and dromedaries of great swiftness are procured from Guinea. The oxen and sheep are small but well flavoured: fowls and pigeons plentiful, but ducks rare, and geese and turkies unknown. There is plenty of game; and storks are common, being free from molestation. In the ridge of Atlas there are mines of iron, neglected by the unskilful Moors; but copper is wrought near Tarudant. The Portuguese formerly held several places on the coast, as Santa Cruz in the S. and Tangier in the N. while the Spaniards still retain Ceuta. The chief Mahometan port is

* It terminates at Santa Cruz, by the Arabs called Agadir. Chenier I. 46. Lempriere, 112, and by the French St. Croix de Barbarie. Mogador is by the Arabs called Souera. Saugnier, p. 53. When the sheiks about A. D. 1500 seized the sceptre, many fugitive Portuguese retreated to the great desert where their descendants still exist. Ib. p. 69, &c. The character of the Moors by Brisson, Ib. 474, &c. is truly horrible.

That eccentric traveller Lithgow proceeded, about 1619, considerably to the S.W. of Fez. The supposed portrait of him and his servant, in the old editions, is copied from the print of a nobleman of Congo in Pigafetta's account of that country, Rome 1591, 4to.

MOROCCO.

Tetuan, which is rather an open road; but the town is in a picturesque situation, and the people particularly friendly to the English. The city of Morocco is situated in a fertile plain, variegated with clumps of palm trees and shrubs, and watered by several lucid streams from the Atlas: the extent is considerable, surrounded by very strong walls of *tabby*, a mixture of stone and mortar which becomes as hard as rock. The chief buildings are the royal palace and the mosks; and there is a considerable *jewry* or quarter inhabited by Jews. The palace consists of detached pavilions, as common in the east; and even the mosks are squares with porticoes, like that of Mecca, the climate not requiring a covered edifice like our churches, or the Turkish mosks, often originally christian edifices. The dress of the Moors is rather singular; and the ladies not only paint their cheeks and chins with deep red, but make a long black mark on the forehead, another on the tip of the nose, and several on the cheeks. The women of the haram are ignorant and childish, their employments being chatting in circles, and eating *coscofu*. Sidi Mohamed, the late monarch, had attained a great age, and his most remarkable characteristic was avarice: he was succeeded by one of his sons called Yazed.†

Botany

* The great range passes on the S. and E. at the distance of about twenty miles: and on the N. is a chain of mountains, probably the Lesser Atlas of Ptolemy. See Lempriere, 183.

† The principal river of the state of Morocco, is the Mulluvia, Mulloiba or Malva, which separates it from that of Algiers. An author (Bruns, Afrika, p. 60.) estimates the population of the kingdom of Morocco at six millions, while another pretends that it does not amount to two millions: so uncertain are the data in this respect. The revenues, (ibid. p. 157.) of the king are valued at a million of piastres. The army in time of peace consists of about 24,000 men, of whom 6000 form the royal guard. The inhabitants of Morocco, are Arabs, Moors, negroes, Christians, renegadoes, Jews, and Brebers. The Moors, though of Arabian original, differ in many respects from their ancestors, but lead a wandering life. The Arabs attach themselves more to agriculture. It is very remarkable that the Moors do not use tobacco in any manner, in which they differ from the Turks and Arabs. The Moors, as well as the Arabs, are of the Mahometan sect, known under the name of Malek. Travellers agree in representing the Moors as uniting every vice. The Jew, are here very numerous, as in all the other states of Barbary, and a warlike and adventurous prince, who should establish on the northern coasts of Africa a Jewish state, would be certain of introducing, in a little time, in this part of the world, commerce, riches, the arts and civilization. But the inhabitants of these countries, who most deserve our attention, are the Brebers; they are the indigenes of all the north-west of Africa, which has received from them the name of Berber or Barbary. Always ready to flee to the deserts of the interior, the vast extent of which they divide with the Moors; or retired in the inaccessible retreats of the mountains, they are but imperfectly subject to the dif-

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*Botany of the North of Africa.**

THE territory now occupied by the Barbary or piratical states, extending from the frontiers of Egypt to the Atlantic ocean in one direct-

BOTANY.

ferent governments of the states in which they live. We have already mentioned those of the mountains of Algiers and Tunis under the name of Kabils. Those who inhabit the mountains of Morocco, are called Chihahs or Choulouhs; those of the plains are every where called Brebers; they call themselves Amzigh. The Chihah or Breber language (See Marsden, Langlès, and Venture, in the voyage of Hornemann, iii. 405, Fr. Tr.) is spoken by all these different people with slight variations, from Siwah to the western extremity of this part of the north of Africa. It prevails even in most of the hamlets scattered in the Zaara, among others in that of the tribe of Beni-Mozab. Two learned men, Marsden and Langlès, have presumed that it might be the Punic language corrupted, but this opinion appears to us void of all foundation. However barbarous the language of a civilized people may be, there are always found proofs of its civilization more durable and indelible than those which result from its monuments and coins; and Venture informs us, that the Breber language is only a jargon of the savage people; entirely destitute of abstract terms and conjunctive particles; that all the words relative to the arts are borrowed from the Arabic, and that they have no other characters for writing but the Arabic, to which they add three Persian letters. The principal cities of Morocco, besides the capital, are Fez, Mequinez, Tangier, Sallee. It is at Fez where the best red Morocco leather is made; as the most beautiful yellow leather is made at Morocco. Fez has about 3000 inhabitants. The bay of Tangier is spacious, but dangerous during the easterly winds; the city is adorned with houses built by the consuls of Spain and England; that of France resided at Sallee, which is said to contain about 16,000 inhabitants, almost all descendants of the Moors who formerly occupied Spain. The port of Sallee is good for nothing, and is choked with sand. Morocco, or more properly Meracach, is said to contain about 20,000 inhabitants; there is a convent of Spanish monks. Mequinez is frequently the residence of the king. In all these cities the houses are badly built, and the streets narrow. The magazines of corn, which are remarkable edifices in the city of Morocco, were constructed by a Danish architect. The arts and sciences are in the most deplorable state; the priests and men of business being the only persons who know how to write.

"Near Fez (Bruns, Afrika, vi. 58, &c.), in a place called Chaolan, there are famous springs of mineral waters. The elephantiasis, that leprosy of hot countries, is unhappily very common in these regions.

"There exist in Morocco some monuments of antiquity, and John Windhus (Journey to Mequinez, &c. 8vo. 1721.) has given a detailed description and a good drawing of that known by the vague name of Pharaoh's Castle. It is a triumphal arch well preserved; and the ruins of a beautiful edifice where are observed columns or pilasters surmounted with Corinthian capitals; and mutilated Latin inscriptions prove, beyond doubt, that this monument was built by the Romans; the triumphal arch is twenty-six feet in height, and twenty feet wide; these ruins are about 140 miles to the south of Tetuan. The picture which the same author has drawn, of the cruel despotism of Albumazer-Muley-Ismael, then sovereign of Morocco, is dreadful and disgusting; it is difficult to believe that men can fall into this state of abjection, and bear an oppression so terrible, while inhabitable deserts remain on the earth." Walckenaer's Notes on this Geography, Fr. Ed. vi. 361.

* Desfontaines, Fl. Atlantica.

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BOTANY.

tion, and from the Mediterranean sea to the Great Desert in the other, includes a tract of country proverbial in better times for its never failing fertility. The soil partaking of the general character of Africa is light and sandy with intervening rocks, though the vales of Mount Atlas, and of the small streams that descend into the Mediterranean are overspread with a deep rich well-watered mould. Hence it is that the most characteristic of the indigenous vegetables are such as flourish on the open shore, or root themselves in the driving sand; while the plants of rarest occurrence are the natives of marshes and forests. Many of the saline succulent species, as the *Salsolæ* and *Salicorniæ*, a few of the bulbous-rooted, as the *Pancratium maritimum* and *Scilla marit.*, together with various kinds of tough long-rooted grasses, among which the *Lygeum spartum*, *Fanicum numidianum*, *Saccharum cylindricum*, and *Agrostis pungens* are the chief, intermixed here and there with the *Heliotropium*, *Soldanella* and *Eryngo*, overspread the flat arid shore, and prevent it from drifting with every wind. The dry and rocky intervals between the valleys of the interior bear a near resemblance to the heaths of Spain; like these they abound in scattered groves of cork trees and evergreen oaks, beneath whose shade the sage, the lavender, and other aromatic plants are found abundantly, and in high perfection. The arboresecent broom, the various species of cistus, the Mignonette (*Reseda odorata*) the Sumach, the tree heath, together with the Aloe, Agave, and several kinds of Euphorbia and Cactus, all of them patient of heat and drought, adorn the interrupted rocks, and afford both food and shelter to the goats by which they are inhabited. The valleys are profuse of beauty and fragrance; besides the Bay, the Myrtle, the Pomegranate, the Olive, the Jasmine, and Oleander, which are common both to Africa and the south of Europe, we find here in a truly wild state, the Aleppo pine, the Red Juniper, the Date-palm, the Pistachia, the Orange, and superior even to the Orange blossom in odour the white musk rose.

To the south of these chief Mahometan states are several countries little explored, as Drah, Sijelmiffa, or Segulmeffa, and the Land of Dates,

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From the Travels in Africa.
Published March 17, 1801, by Cadell and Davies, 19, Strand, and T. Egerton and R. B. Patterson, 10, Row.



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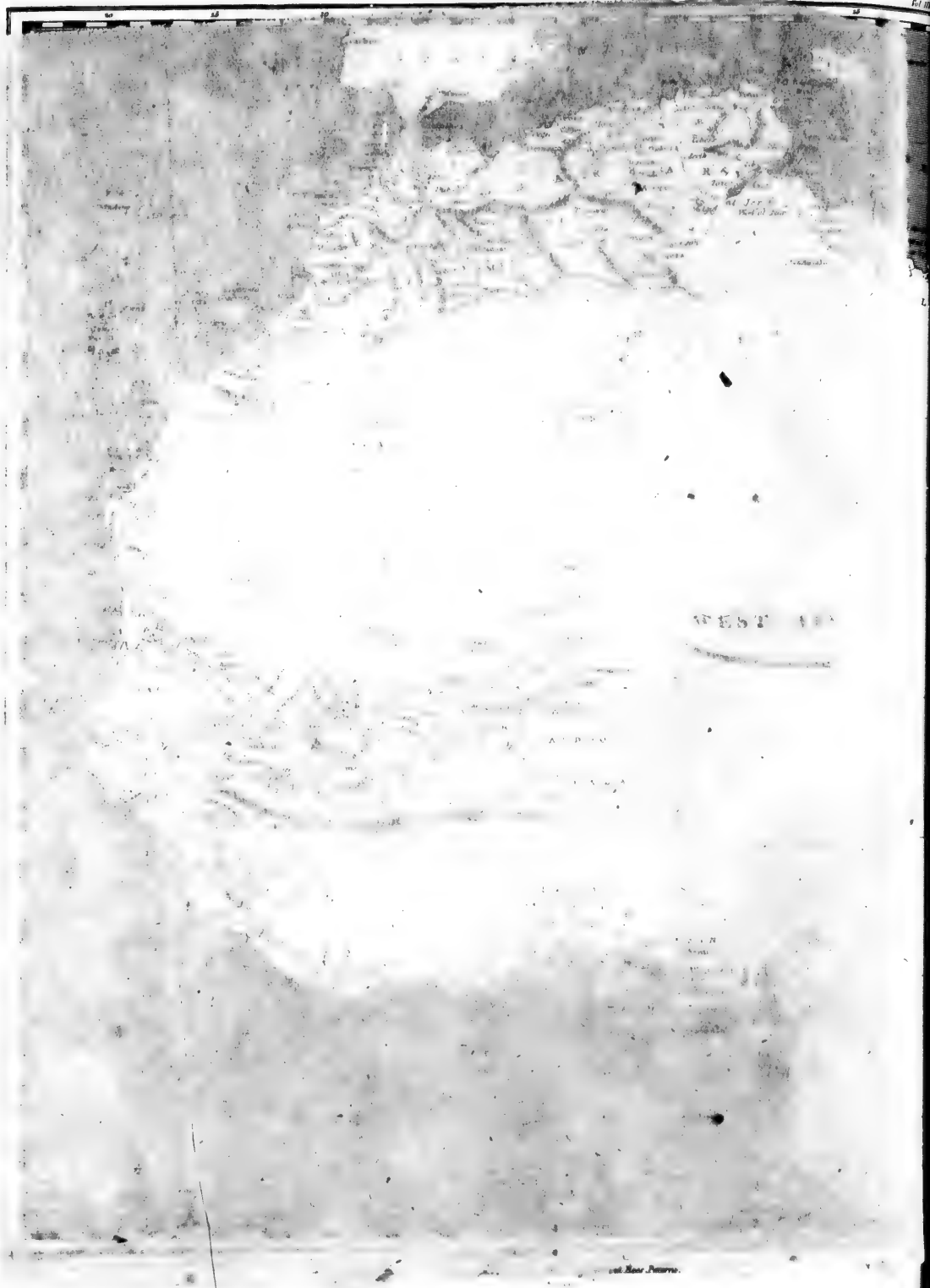
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Dates*, so called because that fruit constitutes the chief food of the inhabitants. Fezzan is a large and remarkable Oasis in the north of the great desert. The more central parts will be briefly illustrated towards the conclusion of this short description of Africa. Suffice it here to observe that, with a few exceptions of the more barbarous districts, the Mahometan faith extends to the great central ridge of mountains, or within ten degrees of the equator: and wretched must those regions have been, into which Mahometans could introduce industry and civilization; while in Europe and Asia they are the fathers of destruction and barbarism.

THE WESTERN COAST.

JALOFS, FOULAHs, and other Tribes—BENIN—LOANGO—CONGO.

ON this side of Africa, so far as hitherto explored, are innumerable tribes, as little meriting particular description as those of America. The Jalofo or Yolofo and Foulahs are the chief races on the rivers Senegal and Gambia; while Guinea, divided into the Grain or more properly Windward coast, Ivory coast, and Gold coast, chiefly supplies slaves, a trade which commenced in 1517 by a patent from the emperor Charles V. obtained at the instance of Las Casas, the noted protector of the American savages! Hawkins, the great navigator, was the first Englishman engaged in this commerce. The settlements in Guinea are chiefly Portuguese; and the slaves from the river Senegal are called Mandingoes, from an inland country of that name; while those from the

* According to some Biledulgeria implies the Land of Dates: but Dr. Shaw, p. 5. says it should be *Blaid al Gerid*, or Dry Country. In Arabic, *gerid* is a branch of the date tree.

gold

gold coast are called Koromantees; and those towards Benin Eboes.¹ For these slaves British goods have been exported to the annual value of 800,000*l*.

The merchants of Dieppe appear to have traded at an early period to the coast of Guinea; but when some French authors assert that this trade was known in 1364, they forget that strong evidence would be required of so remarkable a fact. The French company of Western Africa was established in 1664, and possessed several forts and factories on the river Senegal.* In 1716 this company was united to that of the East Indies. In 1758 the French possessions were seized by the English: and by the treaty 1763 only Goree and its dependencies were left to France. In 1778 it was taken by the English. In 1784 was founded the company of the gum of Senegal, which obtained an exclusive privilege of trading in gum, slaves, gold dust, ivory, wax, and other products of the river Senegal, and dependencies, from Cape Blanco to Cape Verd. Goree was chosen as the residence of the administrators. In 1791 this company was suppressed by the National Assembly, and the trade with Senegal was declared free. The Moors chiefly gather the gum in the three forests of Sahel, Eliebar, and Alfaftak, situated on the north of the

¹ Edwards's West Indies, ii. 50. The forts and factories belonging to Europeans are about forty; 15 Dutch, 14 English, 4 Portuguese, 4 Danish, 3 French. Ib. 53. With the Koromantyns, Accompong is the supreme deity far above all worship. Affaree is the god of the earth, and Iphoa of the sea; while Obboney is the author of evil. Ib. 72. Among the more curious animals are the Chimpanzees, in the face resembling negroes but with straight hair. See Matthews's Voyage, p. 41.

² Though Iwert only advanced ten miles from Christianburg on the Gold Coast, his journey is curious and deserves to be read. The countries he visited during his short excursion in the interior, are very beautiful, fertile, and populous; they are in general woody, but, notwithstanding, more healthy than the shores; they are agreeably intermingled with mountains, vallies, and hills. Fresh water, which is rare and bad on the coast, here is excellent and abundant. About five miles from Christianburg, (*Paul Erdman Iwert's Reise nach Guinea*, Kopenhag. 1788, 8vo. p. 33.) he observed a chain of mountains covered with tall trees, and composed of large grained granite, of gneiss, and of quartz. Of all the countries of the coast of Western Africa, the Gold Coast appears to experience the most intense heat. Iwert, near Rio Volta, has seen Fahrenheit's thermometer as high as 95 degrees and a half in his chamber, and 134 in the open air; surpassing by 26 degrees the greatest heat observed by Adanson on all the banks of the Senegal." Walckenaer's Notes on this Geography, Fr. Ed. vi. 387.

* Herbin, *Statistique de la France*, Paris, 1803, 8vo. vii. 93.

island St. Louis.* The season is the month of March, and the consumption in Europe is estimated at a thousand tons, each of two thousand pounds. In 1788 Nantz sent thirty-two ships, Havre thirteen, Bordeaux thirty-one, Rochelle six, Marseilles seven, some smaller ports six, the total being a hundred and five, the tonnage exceeding thirty-five thousand. The French settlements on the coast of Africa, according to Herbin, are Arguin, a little isle granted to the company of Senegal in 1727. A considerable trade in gum was maintained with the river St. Juan, which is not far distant; an advantageous cod-fishery might be here established. By the treaty of 1783 the English obtained the right of trading with the river St. Juan. On the river Senegal there were several French settlements particularly in the isle of St. Louis at the mouth of that river a great seat of the gum trade. The white population may be about four hundred, but in 1801 the whole including captives was computed at ten thousand. There is another French establishment at Podor, in the isle of Morfil, the latter word being a commercial term for the tusks of elephants. There was formerly a factory in Garlam. The isle of Goree with the dependant factories at Joal, Albreda, &c. but the trade of Goree is now little important. The possession called Gambia is on the river Bunk, about a league from its junction with the river of Sierra-Leone, being only founded in 1784. The French have also some possessions in Barbary on the coast of Algiers, the first established in 1560, a chief object being the coral-fishery.

The countries of Benin and Calabar, which seem to afford the easiest access towards the interior, are followed by other savage tribes. The kingdoms of Congo and Angola are celebrated in Portuguese narrations, and present the most interesting objects in this wide extent of territory.

* The inland countries produce abundance of that gum which is called Arabic, the colour depending on the wood of the tree. It is a natural product, not augmented by industry. Golberry (i. 244.) gives curious details concerning this trade. This gum affords a salutary nourishment, and has even been found to cure consumptions. He mentions, (i. 290.) that he has seen moving columns of sand, forming a magnificent spectacle on the dry deserts to the north of the river Senegal. He asserts that the savages in the little isles of the desert Zaara, are the most wicked and abject of mankind.

VARIOUS
TRIBES.

To the south of these there is deep obscurity * till we arrive at the nations or tribes called Great and Little Nemakas, and Kaffers or Kouffis, on the north of the European colony of the Cape of Good Hope.

The repeated description of the manners of negro tribes would little interest the reader, and only a few peculiarities shall be remarked. The Yalofs are an active and warlike race, and esteemed the most handsome of the negroes. The Mandingoes are widely diffused, and of a mild and sociable disposition. † They wear cotton frocks of their own manufacture; but their huts and furniture are of the simplest kind. The Foulahs, near the river Gambia, are chiefly of a tawny complexion, with silky hair and pleasing features, being probably tribes that fled from Mauretania. The Foulahs of Guinea are of a very different description and the identity of name might have been avoided. Teembo, the capital of the latter, contains about 7000 inhabitants; and there are iron

* From Cape Negro to the bay of Frio the coast can scarcely be said to be inhabited, but it belongs to the Cimbebas, a black nation, whose king is called Mataman. *Sail. Dir.* p. 94.

† The negroes love dancing to excess, and it may be affirmed, says a traveller, that after sun-set all Africa is dancing. All the villages resound with songs and instruments. The melody (Golberry, *Fragments d'un Voyage en Afrique*, i. 414) of these songs is monotonous and melancholy, and always of a very slow movement. This inclination for dancing, idleness, and babbling is common to all the negroes. The love of intoxicating liquors is general, as among all uncivilized nations.

"The climate and the character, says a recent traveller, unite to render the blacks of Africa singularly happy. Endowed with a want of care which nothing can equal, an extreme lightness, indolence, an incredible sloth, and great sobriety; the negro lives on his native soil in the sweetest apathy, without knowing the misfortune of want, the chagrin of privations, the cares of ambition, nor even the devouring ardour of desire.—Their natural wants are but few, and the metaphysical unknown.

"Twenty days of labour in the year are sufficient for the cultivation of the fields, which produce all that is necessary for man. Where territorial property is common, where individuals possess land, the negroes are rich, and the free have almost all slaves who bear the light fatigue of a very simple and confined cultivation; but in the greatest part of Africa, a whole village choose a piece of ground, which they clear and sow; the harvest is common, and divided in proportion to the families; the old men make the division, without causing the least alteration; otherwise it is deposited in the public magazines, closed and watched, and afterwards distributed as it is wanted. Water is the ordinary drink of the negroes. When they regale themselves, (Golberry, ii. 343) it is with wine from the palm or cocoa-tree, or from bananas, or with kinds of beer which they know how to make in many villages, or lastly, with the juices of fruits a little acid, otherwise with water in which rice, honey or maize has fermented." Walckenaer's *Notes on this Geography*, Fr. Ed. vi. 282.

mines.

mines worked by women, besides some manufactures in silver, wood, and leather. These Foulahs, it is said, can bring into the field not less than 16,000 cavalry; and being surrounded by twenty-four pagan nations or tribes, these Mahometans never hesitate to make war for the sake of procuring slaves. To the west of these Foulahs is the English settlement of Sierra Leone, formed in 1787, for the benevolent purpose of promoting African civilization.*

The archipelago of the Bissagos contains about eighteen or twenty islands, one of the chief being Bulam. Each isle seems to be governed by a distinct chief; and the people are cruel and ferocious. These negroes are of a deep and shining black, and their features rather approach to those of Congo. In exchange they give slaves, ivory, wax, and gold. On Bissaux the French have or had a settlement; and the benevolent English settlement on the isle of Bulam is well known. In general these islands are of a particular description, the most important

* This benign colony has been recently attacked by the savages, a proof that conquest alone can civilize Africa. By the treaty of 1783 the river of Senegal and its dependencies were left in the possession of the French, who had extended their factories about 500 miles from the shore. In despite of D'Anville, recent French writers in general call the Senegal the Nigir. Adanson observes, p. 90. that the rainy season, or what is called the winter, is the hottest. The village Mbao, p. 200. corresponds with the American names in Dobrizhoffer; and the burial of the dead in huts covered with sand, p. 203, is that of the Patagons described by Falkner.

The *Sherbero* of the English is, by the French, called *Cerbera*. Is the English name a corruption?

"Bruns, who has given the best description of Africa, thus divides this part of the continent.

"1. All the coast extending from Cape Blanco, to the mountains to the north of Senegal, has been called Upper Senegambia. It is frequented by the Moors, wandering shepherds in the desert of Zaara. They acknowledge the supremacy of the emperor of Morocco, (*Bruns Afrika*, iv. 24.) but only obey him as the find it their interest. The Europeans (*Durand, Voyage en Senegal*) trade with these people in gum; and the establishment of Portendeck, formed by the Dutch, and that of Arguin have been disputed by several European nations, with inconceivable eagerness. The dreadful portrait which Mungo Park has given us of the foolish pride, perfidy and barbarity of the Moors of the environs of Tombuctou, perfectly agrees with that given by Briffon of those who inhabit the coasts.

"2. All the country watered by the rivers of Senegal and Gambia, has been happily called Senegambia, and extends according to Bruns, from the northern shores of Senegal, to the northern shores of Sierra-Leone." *Walckeren's Notes on this Geography*, Fr. Ed. vi. 384.

of them being in a delta at the mouth of the Rio Grande, where it is joined by other considerable rivers.*

At the other extremity of this coast are the Nemakas, whose manners have been illustrated by that romantic enthusiast Le Vaillant, who also pretends to have observed other tribes called Korakas and Houzouanas; the latter being, by his account, an active and hardy race, rather of a leaden colour, but with noses still flatter than those of the Hottentots. They often sleep upon the bare ground; and their only arms are bows and arrows. Further particulars need not be added; as, if the author's accounts be veracious, he has still the unhappy art of making them wear every appearance of fiction.

Benin.

The kingdom of Benin is asserted to be very considerable; and it is said that the monarch could raise an army of one hundred thousand. The capital of the same name is said to contain thirty streets of low houses, while the inhabitants are remarkable for cleanliness and propriety of behaviour. They are said to acknowledge a supreme benevolent deity, whose worship they deem superfluous, as he can neither be influenced, enraged, nor appeased; but they offer sacrifices to inferior and malignant spirits, in order to soothe their enmity.†

Loango.

Loango is a country of no small extent, on the N. of Congo, and of which an account has been published by Pigafetta and others, transcribed at considerable length in Dr. Dapper's Africa, from which that of Ogilby is chiefly translated. The people are rather industrious, as there are weavers, smiths, potters, carpenters, and makers of canoes, caps, and beads. The exports are elephant's teeth, copper, tin, lead,

* Durand Voyage en Senegal, i. 174.

M. Durand i. 236, has observed that the river Gefves or Geba, one of those which form the delta of the Bissagos, has a very steep descent, and is subject to a tremendous *gore* or influx of the tide, which ascends in three hours or less, while the decline is of six hours. This phenomenon is also known in the Maranon, and at Libourne near Bourdeaux, not to mention the Severn.

† Second Journey, iii. 166, but see Dapper's Africa for the Houaquas.

† The river of Benin appears to be considerable from Bosman's account, p. 399, but is divided into many branches, and the climate most pernicious. The government seems a singular aristocracy of three chiefs, who control even the king. Strings of coral are worn as badges of honour; but this coral, p. 408, is a pale red earth or stone, like speckled red marble, and there is also, p. 102, a blue fort. Was the coral of Tibet of this kind? Here, as in almost every part of Africa, the commonest events are imputed to witchcraft. Benin is only a village of clay houses, there being no stones in the country larger than a man's fist.

iron. The common people are held in a kind of slavery, but may migrate. The superstition of magic prevails, as usual among the African tribes; and the supposed enchantment or superior power is called *mokisi*, while a magician is styled *ganga*. * But the best and most recent account of Loango is that drawn up by Proyart, from the memoirs of Belgarde and other French missionaries, who settled in this country in 1769.† The capital Bouali is by the French called Loango. The dry season begins with April, and ends with October; but the greatest heat is in the rainy season, or the other six months.‡ Our author asserts that even the mountains are of mere clay, without rock or stone; and the rivers do not increase in the rainy season. The soil seems to be wholly a compact clay, which sometimes splits into vast abysses. Vegetation however flourishes; and among the trees are the cocoa, banana, orange, lemon, pimento, with the cotton shrub, and sugar cane. The palm wine, a favourite African beverage, is procured by piercing the tree where the fruit begins to swell from the trunk.

The latest account of Congo seems to be that by John Anthony Cavazzi de Monte Cuculo, a capuchin missionary, which appears however to be somewhat tainted with false miracles and fanaticism.† In October begins what may be called the spring, but heavy rains continue for two or three months. About the end of January is one harvest; and in March more gentle rains commence and continue till May, when there is a second dry season or harvest; their nominal winter beginning in

* In Annico, a kingdom to the N. W. (the royal title is *Micoco*) Dapper asserts that the markets were supplied with human flesh; nay it is even affirmed that all the dead are devoured. Univ. Hist. xiii. 266. Angola is said to produce the orang outang, there called quoss morrou, and Tulpius has described one sent to the Prince of Orange, while Dapper and Ogilby have published a print. From Angola many slaves are exported. The proper name of that country seems Dongo, while N-Gola is the royal style, but the N is scarcely pronounced. Proyart, 174.

† Paris, 1776, 12mo. with a curious map of the mouth of the Zahir.

‡ P. 11. The climate is most pernicious to strangers, but the use of flannel and the bark is recommended by Mr. Maxwell. See his chart of the river of Congo, or the Sailing Directions of the African Pilot, p. 88. But the natives are so healthy that the king of Kacongo was 128 years of age. Proyart, 103 and 388.

† It was printed at Bologna, 1687, folio; and translated by Labat in his *Ethiopie Occidentale*, 5 vol. which must not be confounded with the *Afrique Occidentale* of that most voluminous editor and compiler.

July.

iron.

CONGO.

July. * The Zahir or Zair is a grand and rapid river, and the mouth said to be five leagues in width, freshening the sea to a great distance. It has vast cataracts, near one of which is a mine of bright yellow copper. † The Dante is an animal like a small ox, with bright black horns, resembling those of a goat. The houses are round thatched hovels, even in the chief city, called St. Salvador by the Portuguese. The Congoesse have the negro colour without the features, which rather resemble the European; hair sometimes of a deep reddish brown, and eyes of a dark green or sea colour. Once a year the graves are opened, and the bodies or bones decorated. This custom seems peculiar to Africa and America. ‡ Congo produces millet, maiz, and excellent fruits; with the sugar cane, and varieties of the palm. There are said to be mines of iron and copper: and among the animals is named the *cojas morron*, which seems the *orang outang* of Borneo. § The accounts

• Labarthe, p. 206, reminds us that on the Guinea coast the rainy season is from May to September, not the contrary as Raynal has asserted.

† The Zahir, or river of Congo, is very rapid and brings down numbers of floating islands, like the river Benin, some a hundred yards in length. African Pilot, S. D. p. 98. But the mouth is only somewhat more than two leagues in breadth. Ib. 86. The English yearly export from Yomba many cargoes of a red dyeing wood. Proyard, 159; who adds, p. 167, that 200 regular troops would conquer all the south of Africa.

‡ From Proyard's History of Loango, p. 62, it appears that the Portuguese have been completely expelled from this kingdom. When the Dutch under Prince Maurice subdued a part of Brazil, they found it necessary to attack Angola, 1640, for a supply of slaves, without which the other conquest would have been of no value. Their transactions in this country are related by Barlaeus in his account of the expedition to Brazil, Cleves 1660, 12mo. Of Congo, &c. there is a good account in the Modern Universal History, which is carefully compiled from original authors. See vols. xv. xvi. edit. 1760, or xii. and xiii. edit. 1781. Slavery is not a foreign import, but indigenal in Africa; and in Benguela, a kingdom or province to the S. of Angola, the natives will sell their relations or children, from mere wantonness, Ib. xiii. 7. The chief worship of the Jagas consists in frequent sacrifices of human victims, particularly children. In such a country slavery is a deliverance. The Galas seem to be a tribe of the Jagas: who are said on the south to have once penetrated as far the Cape of Good Hope. Univ. Hist. xiii. 251.

§ "The most remarkable species of ape, is the *simia troglodytes*, called Kimpanzay in Congo; it is the joko of Buffon, who has confounded it as well as many other naturalists with the *simia satyrus*, or ourang-outang of the Indies. The kimpanzay is, after the ourang-outang, the ape which most approaches man by his physical conformation; but he equals and perhaps surpasses the ourang-outang in sagacity; a recent author (Grandpré, Voyage en Afrique, iv, 26,) assures us that it is not common. Walckenaer's Notes on this Geography," Fr. Ed. vi. 392.

of the Portuguese writers, the chief authorities concerning Congo, and the neighbouring states, after border so much on the fabulous, that amidst doubtful circumstances brevity becomes the safest choice. If they be credited, the aliconda, a tree of this country, is of so great bulk that ten men cannot fathom it, while the fruit resembles a gourd, and the bark yields a coarse thread, of which ropes are formed; a description which would seem to indicate a species of the cocoa palm.¹

It is to be regretted that the curious work of Cavazzi, translated by Labat in his *Ethiopie Occidentale* should be replete with missionary fables. If reduced to one half, it would have been a very interesting publication. He informs us that on the east of Congo is a lofty ridge called the Mountains of the Sun, or the Burnt Mountains. On the north of the river Zahir, near the great cataract, are mines of copper. It appears from the African Pilot, in which there is a curious chart of the navigation of this river for forty-five leagues, that the first cataracts or falls are about twenty leagues farther; but the upper cataracts according to Cavazzi are truly terrible. The courts or towns are generally huts of straw, within a fence of thorns. In the province of Scella, perpendicular rocks extend for the length of ten leagues. The days and nights may be said to be always equal. According to our author the animal called *abada* or *alicorno* resembles a horse, but has the head of a stag, with two horns, one in his forehead, the other above his nostrils. In Congo one supreme God is acknowledged, but with a number of inferior divinities, a creed of wide extent, and which may be called the true religion of nature. But at a *Tombo*, or solemn funeral ceremony, numbers of captives are killed and devoured. The king is the sole proprietor of the lands. Cavazzi's account of the Jagas is truly singular. Zimbo, a Jaga chieftain, attacked Melinda; and being defeated made the tour of Africa, approaching towards the Cape of Good Hope, and returning by the western parts. The women often expose their own children to wild beasts. Some Jaga princes delight to eat young women, but the favourite dish is a fœtus cut from the womb; and a princess was so fond of her gallants, that she ate them successively. The laws of the Jagas called *quixillas*, present a horrible code of vice and cruelty, being certainly, the only na-

¹ See Dapper's Africa.

tional code ever enacted for these purposes. Their most delicious beverage is warm human blood. The town of St. Salvador, the capital of Congo, is in a most romantic situation, in a plain on the top of a mountain, like some Hindoo fortresses; while from the sides burst numerous fountains and cascades of the purest water.

In the kingdom of Benin, as in Congo, there are sometimes human sacrifices of three hundred persons at a time. In both countries stones may be said to be unknown in the plains, and vallies; and the same singularity has already been observed in the countries on the east of the Andes. In the province of Ganghella there is a mountain surmounted by another, both being crowned with verdant meadows; and at no great distance is the mountain of Chifalla, which rises suddenly like a vast tower. A still greater curiosity of this kind is Maopongo, or the Fortrefs of Rocks, on the north side of the river Coanzo, being a circle of rocks of twenty-seven miles, supporting a great plain, with a hill on the top. The skirts are full of fountains and cascades; and exceed in height the most lofty European towers. As in Cheddar Cliffs, nature has imitated towers, gates, buttresses, &c. and this singular circle is full of difficult ravines, while there are only two practicable passages.*

The jesuits of Loanda had twelve thousand slaves.† In Congo there are two harvests, as they sow in January and reap in April; which last month begins their winter, though it resemble an Italian spring. They again sow in September and reap in December.

As the work of Cavazzi is little known, a few other particulars may be subjoined. The summer or rainy season extends from October to March inclusive, while the dry season is called winter: but the natives count six seasons, according to different appearances of nature. The tree called *alacondo* is sometimes so large, that ten men cannot embrace it; but as it rots and dies suddenly, the fall of the branches is very dangerous. The bark of the *dondo* so much resembles cinnamon, that it may be used as a substitute; and it is, perhaps, the cinnamon of South America. The tygers are so ferocious that one will sometimes attack six or seven armed

* See a print of this natural curiosity in the work of Cavazzi or Labat.

† Carli apud Labat, v. 123.

men; but our author only mentions that the skin is diversified with CONGO. several colours, which would imply the panther, perhaps the same animal with the leopard, for there seems no reason to believe that the tyger is a native of Africa. The serpent called *boma*, a name which singularly corresponds with the American *boa*, is amphibious, from twenty-five to forty palms in length. Its manners correspond with those of the *boa*. The number of forests and deserts must evince that this region of Africa is thinly peopled; but the natives are so attached to their country that they call it the sole work of the great creator, while others were formed by inferior deities. Like the savages of America, the people of Congo are fond of oratory, and use many poetical tropes and figures, being less studious of the truth of the argument, than of, perhaps, persuading the hearers to an act of injustice.* According to our author, envy is their predominant fault; and there are few more productive of evil in society, as by seeking to depress excellence of all kinds, and the prosperity arising from superior industry and talents, the society becomes its own enemy, and tramples on its own decorations and advantages; for individual exertion and reputation are seldom merely personal, but are advantageous to the other members. These negroes, on the contrary, if they see a compatriot prosperous in his affairs, clearly evince that they have neither honour nor conscience. The most atrocious calumnies, the most false accusations, the most artful insinuations and intrigues, and even the most outrageous violence, are used with sedulous assiduity, till they ruin the prosperous man, whose exertions might benefit the whole community. Void of natural affection, they will sell their nearest relations for a bottle of brandy; and an instance is recorded of one man who being at a loss for a breakfast, sold his mother. Their cruel and abominable delight

* In his late able work on the Philosophy of the Human Mind, which throws a new and clearer light on the intellectual world, Mr. Stewart gives the following forcible remark on this subject. "This last observation points out to us, also, one principal foundation of the art of the orator. As his object is not so much to inform and to satisfy the understandings of his hearers, as to force their immediate assent; it is frequently of use to him to clothe his reasonings in that specific and figurative language, which may either awaken in their minds associations favourable to his purpose, or may divert their attention from a logical examination of his argument. A process of reasoning so expressed, affords at once an exercise to the judgment, to the imagination, and to the passions; and is apt, even when loose and inconsequential, to impose on the best understandings."

CONGO.

in drinking warm human blood, and eating human sacrifices, has already been mentioned. The *Nquiti* were an infamous sect, who meeting in remote places indulged their corrupt imaginations by the grossest acts of impurity. The houses are little, dark, and infected with all kinds of filth. The *zaguay*, a favourite weapon, is from eight to ten palms in length, formed of a strong light wood, the iron head resembling that of a lance. Such is the oppression of the rich that the injured dare not even complain, but affect to return thanks for what is left. They are singularly averse from the voyage to America, where they imagine that sweet oil is drawn from their bones, while their flesh is converted into gunpowder. Their dances, it is well known, are extremely lascivious; and accompanied with obscene songs, and all kinds of indecent familiarities. The use of iron has little advanced their progress in society, though they feel its value and reverence smiths; the most ancient artisan of that description having been, by their tradition, a king of Congo. In some districts long breasts are reckoned among female charms, they are decorated with little ribbons of bark, and being thrown up easily rest on the shoulders. The cruelty of the *Jagas* surpasses all description. Queen *Zinga* tore her own son from her breast, and bruising him in a mortar, formed a horrible unguent, which continued to be made in the same manner of the bodies of babes, being regarded as a sovereign charm. The *Jaga* chieftain, *Cassangi*, used to have a young woman killed every day for his table, and she was often selected who had passed the night in his bed. *Zinga* ordered that all her officers, before proceeding on an expedition, should exercise the conjugal mysteries in public, in the midst of a solemn assembly, with the wife or concubine, who was the most favourite object of their love. Moving villages, or rather camps of the *Jagas* are called *libats*, and are arranged with some judgment. The slaves die in certain expectation of a similar but happier existence in another world; and it is esteemed an act of generosity to kill a beautiful female at the tomb of a friend. Upon one occasion however, the blow not being fatal, the girl returned; and having artfully reported that the deceased had sent her back, she was favourably received. The *Singhillas* or priests and magicians are singularly despotic; and while they enforce the laws on others, esteem themselves free from their observance. As after a battle the

bodies are claimed, each warrior is understood to wound in a particular part, that he may select his prey. The women, by our author's account, are as ferocious as the men; and delight to cleave the skull and suck the warm brains of the slain. Five or six strong men will at once destroy and share a captive, by cutting where their portions begin, and then tearing him in pieces. The kingdom of Congo is elective, there being three or four hereditary electors, as among the Muiscas of South America. Polygamy is universal; and they regard the doctrine of monogamy as proceeding from a political design of the Europeans, who wish, by depeopling the country, to effect its subjugation: yet the obstinate ordinances of the popes having ranked polygamy with murder; the wife capuchins having destroyed some tombs of christian nobles, because they had kept concubines; and a christian woman having fled from her husband on the same account; the whole system of christianity may be said to have at once fallen to the ground; and the long labours of the missionaries were ruined by their absurd and ignorant zeal, turned by a ludicrous bias against imaginary crimes, (in the irradicable opinion of the natives,) and of which they themselves could not be guilty, instead of being directed against theft, envy, malignity, intrigue, and avarice, which might have been impartially construed against themselves.

When queen Zinga visited the viceroy of Angola, she perceived that there was only a splendid seat for him, and with great presence of mind ordered one of her female attendants to stoop, in such a posture that her mistress sat at ease on her back. On the queen's departure she was requested to order her slave to rise, but she refused; telling the viceroy that, as he seemed in want of chairs, she had left him this. Though indulging herself in every excess, she would cruelly torture the ladies of her court, if suspected of any amour. The account of the death of Zinga, given by our religious capuchin, is striking, and presents a singular confusion of ideas. Having pretended to have returned to christianity, which she had formerly abandoned, this cruel and vile woman is represented as dying the death of a *saint*, on the 17th December 1663, at the advanced age of eighty-one; as if the opinions or sentiments of a dying person, enfeebled by disease, and tainted by feverish delirium, could have any influence in a decision on the general character. It is the senti-

ments of health, and not of disease, that merit attention ; and it would be idle to regard opinions as permanent which would have vanished on the return of health. The capuchin was obliged to preach to the people in favour of this *most christian queen*, to use his own expression, for they had adopted the more rational idea that her soul had passed into a tiger, who infested the neighbourhood.

Botany of the Western Coast.

This coast appears in general to be sufficiently well watered, and accordingly bears a striking resemblance in its vegetable productions to the opposite shore of the American continent. The usual plants of the tropical climates are found here in perfection and in great abundance, but we yet want a scientific catalogue of indigenous vegetables to ascertain what are the peculiar and characteristic features of its flora. The low shores of the rivers, as far as the tide reaches, are bordered with mangroves and bamboos : the luxuriant Guinea grass, the sugar-cane, ginger, turmeric, and cocoa-nut, with various other species of palms, root themselves in the moist deep soils. Numerous kinds of dyeing woods, and of timber fit for ornamental or useful purposes, abound in the forests. Indigo and cotton of a superior quality are met with ; both wild and cultivated. The sweet cassava, differing from the American manioc in being perfectly innoxious and wholesome even without cooking, the Guinea pepper or capsicum, the yam, sweet potatoe, rice, maize, gourds and melons of all kinds, are the principal food of the inhabitants, and probably are indigenous. The copal tree, the sandal wood, ebony, and mimosa Senegal, from which exudes the mucilaginous gum of the same name, are plentiful in the drier and sandy parts of the country.*

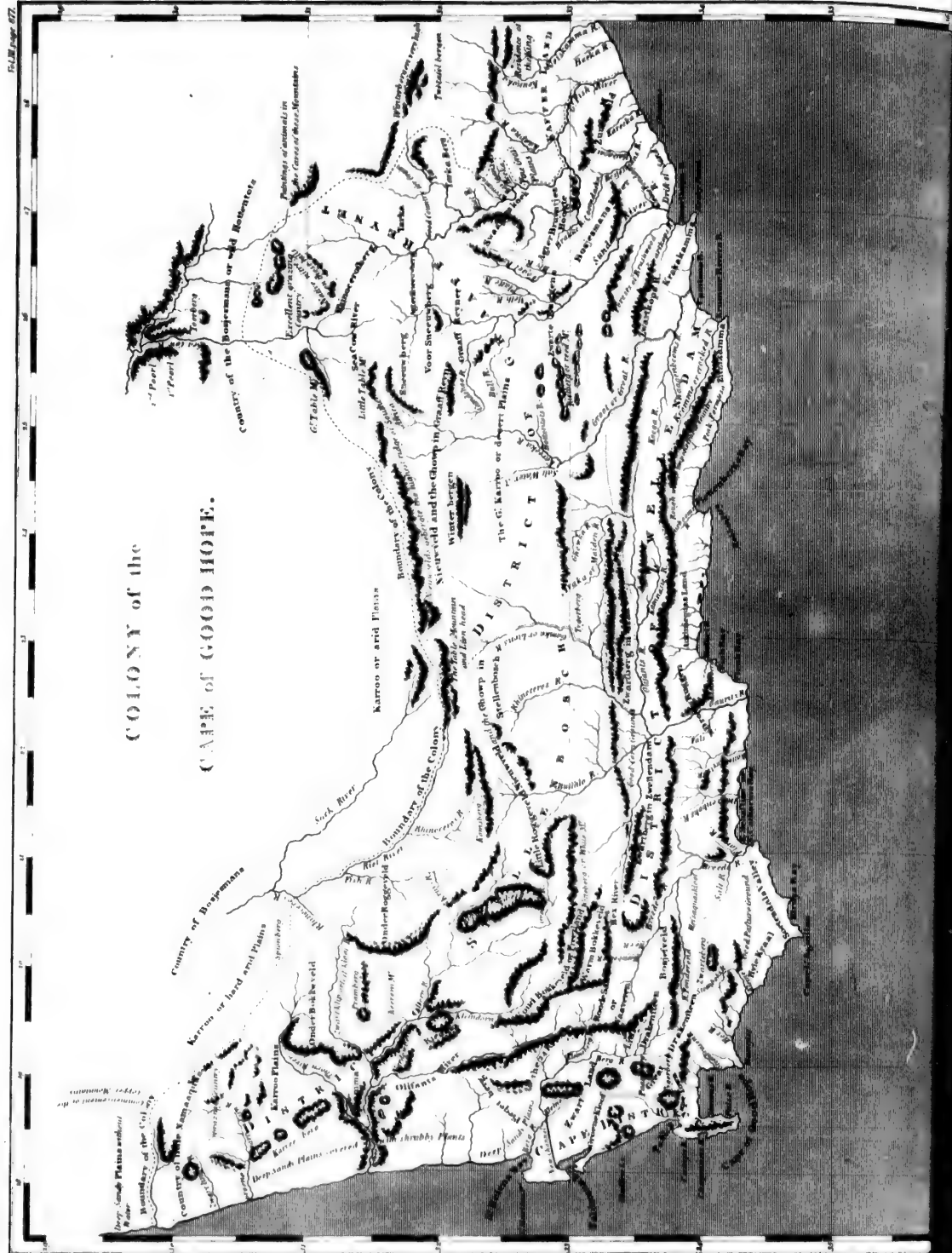
* "The most remarkable tree in these countries, is that enormous colossus of the vegetable kingdom ; the immense baobab, the *adansonia digitata* of Linæus. The learned Ifert (*Reise nach Guinea*, p. 281.) has observed many species of the same kind, though botanists have only described one. Its fruit (Golberry, ii. 94.) called the bread of apes, serves for the nourishment of the negroes, who religiously watch at sun-rise the opening of its flowers ; it adorns with its verdant and compressed vaults, the barren top of Cape Verd, which, it is said, thence takes its name ; and its hollow trunk sometimes serves for a temple or hall of assembly to a whole hamlet : it is not, however,

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COLONY OF THE CAPE OF GOOD HOPE.

THIS territory, upon the recent English conquest, was found to be of more considerable extent than had been supposed, being 550 English miles in length, and 233 in breadth, comprehending an area of 128,150 square miles.¹ The white inhabitants, exclusive of Cape Town do not exceed 15,000; and the whole may be about 20,000. The Dutch settlement was formed in 1660. To the S. E. of Cape Town are some small vineyards, which yield the noted wine called Constantia; and even in remote districts there are plantations of various kinds: but large tracts are irrecoverably barren, consisting of ranges of mountains, and level plains of hard clay sprinkled with sand, commonly called *karroos*. The mountainous chains run from E. to W. being probably terminating branches of a spine passing N. and S. like those of the Uralian ridge. The first ridge is from twenty to sixty miles from the sea; the second, called the Zwart Berg, or black mountain, is more lofty and rugged, and about the same distance from the first: the third is the

however, lofty; Golberry observed one of this kind, twenty-four feet in height, by thirty-four in diameter, and a hundred and four in circumference. The other most remarkable trees of these countries (Isert's *Reise nach Guinea*, p. 47.) are after the *sluis* *Guineensis*, from which are drawn oil and a kind of butter; the cocoa-tree; different species of lemons, of orange trees; the *carica* *papaya*; the tamarind, the *dracena draco*; a new species of *robinia*, observed by Isert, on the Gold coast; the mangle (*ibid.* 182.) *-bizopora mangle*; a tree resembling the tulip tree, which forms a new genus of the tetrandria of Linnæus; another (*ibid.* 116.) improperly called cedar, which is a new species of *avicennia*; pisang or bananas, *musa sapientum*; the precious shea or the butter tree, one of the principal riches of the distant kingdom of the Bambaras and Bambocks; it is probably of the class of *croton*: lastly, the *pterocapus santalinus*, of which we have already spoken." Walckenae's Notes on this Geography, Fr. Ed. vi. 389.

Darwin informs us, that the *Adansonia* is sometimes twenty-five feet in diameter, the spread a hundred and fifty, and the height seventy.

¹ Barrow's Travels, 1801, 4to. p. 9.

Nieuveld, which with the second incloses a great karroo or desert, rising like a terrace about 300 miles in length E. and W. and 80 in breadth. The country is more fertile towards the Indian ocean than towards the Atlantic, a character which seems to pervade Africa; as on the east is Abyssinia, while on the west is the Zaara. The chief resorts of trading vessels are False Bay on the S. and Table Bay on the N. which opens to Cape Town. The mountains in the vicinity of the Cape are of blue schistus, and indurated clay, mingled with balls of granite, blocks of which substance are common on the hills of southern Africa, strangely hollowed out into cavities, the resorts of runaway slaves. On the granite and clay is siliceous sand-stone, surmounted by granular quartz; this description may extend to most of the inland mountains; but those called the Copper mountains, S. lat. $29^{\circ} 40'$, supply a prodigious quantity of that metal in the form of vitreous ore, which is smelted by the Damaras, a Kaffer or Kouffi nation in the vicinity. The rocks called the Pearl and the Diamond are vast fragments of granite; and Mr. Barrow discovered far to the north what he called the Nemaka Pearls, consisting of large rounded masses of that stone. There are some wolves and hyenas, and various kinds of antelopes; and among birds, eagles, vultures, kites, crows, turtle doves, &c. more inland are all the wild and ferocious animals of Africa, and hippopotami abound in the rivers. Mr. Barrow wounded a condor, the spread of whose wings was ten feet and one inch.

Botany.

There are few places of which the natural history has been so ably explored as the territory of the Dutch colony at the Cape of Good Hope and the countries adjacent: nor does any seem to have better repaid the labour of research. The botany of southern Africa is more rich and peculiar than that of any other country, and most of the singular and beautiful inhabitants of our stoves and green-houses have been hence procured. Numbers however equally remarkable remain behind, which from their size, or from accident, or from the necessity of selection among a multitude, are as yet strangers to European cultivation. The class of bulbous rooted plants alone might be selected as peculiarly characteristic of the Cape, for no where else are they found so abundant, so various, or so splendid: what pen can describe the innumerable gay varieties of the
ixia

ixia inoculata, or the exquisite fragrance of the nocturnal *ixia* cinnamomæ; who can reckon up the beautiful species of iris, moræa, gladiolus, amaryllis, hæmanthus and pancratium, which at the conclusion of the autumnal rains adorn the meadows at the foot of the mountains with every brilliant hue that can be imagined? Nor is it only at one season of the year that this splendid scene is exhibited, every month has its peculiar beauties; to the bulbous plants succeed the species more patient of heat and drought: the bright gnaphaliums, the xeranthemum fulgidum, and speciosissimum, remarkable for their flowers of red, yellow and silky white, the scented geraniums and pelargoniums glowing on the sides of the hills intermixed with numerous species of shrubby and arboresecent heaths, compose a scene of unrivalled magnificence, where the eye wanders with delight from beauty to beauty, till fatigued with splendour it repose on the light silvery foliage of the protea argentea, on the vigorous green of the spreading oak, or the still deeper hue of the aspiring stone pine. The hard and stony wastes are scattered over with succulent plants of the stapelia, mesembryanthemum, euphorbia, crassula, cotyledon, and aloe; while such of them as assume the height and character of trees, mixed with the weeping willow and mimosæ of various kinds, overspread the banks of the temporary torrents. The forests are principally on the eastern border of the settlement, and have been but little explored; they furnish the iron wood, the African oak, the Haffagai wood, the taxus elongatus or yellow wood, a few species of Zamia or Sago palm, the scarlet flowered guaiacum, and the incomparably splendid strelitzia reginæ.*

For a more minute account of this interesting colony, the only European settlement in Africa that deserves the name, the reader is referred to the excellent work already quoted, which forms a striking contrast with the gasconades of Le Vaillant. Mr. Barrow visited the Kouffis in the east: and conceives that a belt of that race spreads across to the Atlantic. The Nemakas are of the same race with the Hottentots;† but the Damaras on the Copper Mountains, and north to the Orange river and tropic of Capricorn, are Kouffis, a race whom our

author

* Barrow's travels. Thunberg, Prodomus plantarum Capensium.

† Sparrman, i. 183, observed the natural complexion of the Hottentots to be an umber yellow. By his account, as well as that of Barrow, the lion is an insidious and cowardly animal. This ingenious

author suspects to be of Arabian extract, as they widely differ from the Hottentots and the negroes, and are acquainted with the smelting of copper, and some other rude arts. The country of the Damaras is so barren and sandy that they cannot keep cattle. The Orange river, also called the Groot or Great River, seems to rise about S. lat. 30° . long. 28° . E. from Greenwich, and passes W. by N. till it join the sea between the Great and Little Nemakas. There are high cataracts; and it has inundations like the Nile. On the shores are carnelians, calcedonies, agates and variolites. "The rains in the great mountains beyond the Kaffers and the Tambookies, along the feet of which the Orange river runs, collecting their tributary streams in its passage, commence in November, and cause the inundations to take place towards the Nemaka country in December." Mr. Barrow's account terminates with part of the country of the little Nemakas, included in the colony: beyond which are the Copper Mountains and sandy deserts; and he ridicules Vaillant's supposed excursions in this quarter, while he never passed the Orange river. Yet Mr. Barrow seems a stranger to the camelopardalis, which the French traveller appears certainly to have hunted and brought to Europe. The preposterous vanity of Vaillant greatly injures the credibility of his narrative, and his map of the colonial possessions cannot be compared with the actual survey by Mr. Barrow. To the north of the Green River the map of the French author seems imaginary, as he is a stranger to the Damaras, though he insert the Copper Mountains.*

In

nious traveller, ii. 119, &c. considers the hippopotamus as a larger animal than the rhinoceros, and next in size to the elephant.

* Barrow, p. 298. The Tambookies are to the N. E. of the Kouffis; thus according to our author's idea, there is a great range passing N. W. and S. E. about lat. 27° or 28° . This great range, Paterfon, p. 125, says, runs E. and W. at the distance of about four days' journey from the mouth of the Orange river, being called the mountains of Brenas; probably the inmost terrace of the Table land of southern Africa, which seems to be pervaded by the Jagas, a wandering nation like the Tatars. Near the Orange River, Paterfon observed that the natives cut off the first joint of their little finger.

* His Orange River flows from N. E. to S. W. the reverse of the truth: and beyond the Great Nemakes he places a stream called the River of Fish, with the tribes of Kabobikas and

Houfiqua

In his voyage to Cochin-China, Mr. Barrow has inserted a curious account of a journey to Lectakoo, the capital town of the Booshuanas, ^{Booshuanas.} about lat. $26^{\circ} 30'$ in the centre of the part to the north of the Cape. Passing the Gariep or Orange River, the travellers proceeded to the north, and met some missionaries sent by the society in London for the propagation of the Gospel : and it may be useful to repeat the following remarks arising from their accounts. " Here the superior advantages resulting from the system of the Moravians over that of the Gospel missionaries are most forcibly demonstrated. Instead of encouraging the natives in their rambling disposition from place to place, they laboured to fix them to one spot ; instead of preaching to them the mysterious parts of the Gospel, they instructed them in useful, and industrious habits ; instead of building a church, they erected a store-house. They caused this common store to be divided into as many compartments as there were families, leaving one at each end larger than the rest to be appropriated solely to the use of the widows and the orphans ; and having taught them the process of salting and drying the fish caught in vast multitudes in the summer months, the produce was collected into this general depository of their industry, to serve as a provision for the long and dismal winter, which reigns in that inclement climate ; deducting, however, from the compartment of every family a tenth of the produce, to be deposited in those of the widows and the orphans. Their labours were crowned with complete success. From this time a provision was made sufficient for the preservation of these desolate and helpless creatures. Thus the Moravian Society has been the means of converting the inhabitants of Labrador into useful citizens, as well as good Christi-

Houfouanas under the tropic. The camelopardalis he found in lat. 27° , the rhinoceros in 25° . Perhaps there may be jealousy on one side, as well as exaggeration on the other.

The Nemakas are mentioned by Dapper and Ogilby, who add the Houfakas, certainly the Houfouanas of Vaillant ; but as modern philosophers never read, they of course make many discoveries. The same learned author, First journey, ii. 145, quotes Pliny and Herodotus, for some account of the Hottentots ! There is no danger from learning ; but that from reasoning ignorance is very great. The ancient philosophers were men of learning ; the modern too often men of consummate ignorance : and we all know and feel the evil effects of the ignorance of Rousseau, to instance a solitary example.

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ans, whilst the African Society has not reclaimed a single Bosjesman from the wild and savage state in which its zealous missionaries first discovered him."*

The account of Leetakoo is new and interesting. "The town of Leetakoo, according to the direction and the distance travelled by the expedition from the Roggeveld, is situated in latitude 26° 30' south, and longitude 27° east. A river, which from the width of the channel must occasionally be of considerable size, runs through the midst of it. The town, in its circumference, was estimated to be fully as large as Cape Town, including all the gardens of Table Valley; but from the regularity of the streets, and the lowness of the buildings, it was impossible to ascertain, with any degree of accuracy, the number of houses; it was concluded, however, that they could not be less than two, nor more than three thousand, all nearly of the same size and construction, and differing in nothing from that of the chief, except that his was a little larger than the others. The whole population, including men, women, and children, they considered to be from ten to fifteen thousand persons. Round numbers are rarely exact. The two commissioners, it seems, at the end of fifteen days, on comparing notes, found that the estimate of one was ten, of the other fifteen thousand. The truth may probably lie in the middle. The ground plan of every house was a complete circle, from twelve to fifteen feet in diameter; the floor of hard beaten clay, raised about four inches above the general surface of the inclosure. About one-fourth part of the circle, which was the front of the house, and observed generally to face the east, was entirely open; the other three-fourths were walled up with clay and stones, to the height of about five feet. By an inner circular wall passing through the centre, and described with the same radius as that of the first circle, and consequently cutting off one third of the circumference, an apartment is formed for the depositing of their valuables, as skin clothing, ivory ornaments, haggais, knives and other articles which to them are of essential use. In this apartment, also, the elder part of the family take their nightly rest. The children sleep in the half-closed *viranda*, which comprehends two-thirds of the circumference of the circle." Adjacent are large clay

* Barrow's Voyage to Cochia-China, London, 1806. 4to. p. 380.

vessels serving as granaries ; some of them capable of holding two hundred gallons.*

Our travellers had also reports concerning another numerous tribe farther to the north. "A Hottentot who had travelled into that country, assured Mr. Truter that there was not in all Africa so perfectly good-humoured and so well-disposed a people as the Barroloos ; that they had many towns, the largest of which was so extensive that it required a whole day to walk from one extremity to the other ; that their houses were of the same kind as, but much better built than those of the Booshuanas ; their gardens and grain-lands better cultivated ; that the whole surface of the country was covered with trees and shrubs ; water and rivers abundant, and the soil every where productive : that the Barroloos were a very ingenious nation, and skilful in carving wood and ivory ; that he had seen their furnaces, for melting iron from a brown earth and stone, and copper from a grey earth ; that the distance from Leetakoo did not exceed ten days journey of the common rate of travelling. This information, was, however, obtained too late ; and the country of the Barroloos is still untrodden ground for the European traveller, who may in future be inclined to prosecute further discoveries in Southern Africa." From this account it would appear that the Barroloos must be rather to the north of the tropic ; but our ingenious author may rest assured that there is no foundation for the report of a communication existing between the Portuguese of Congo and those of Mozambic. Mr. Barrow relates a singular circumstance in the natural history of the elephant, that no part of a skeleton of that animal is ever found above ground ; whence it is conceived that they bury their dead ; and an elephant being shot, when the party returned the following morning to take the tusks, they found from fifteen to twenty of these animals employed in removing the dead body with their probosces. If the fact be certain, it seems little probable that they can open so large a space in the earth, except, perhaps, in the sandy deserts ; and it is more conceivable that they should cover their dead with large stones.

Barroloos.

* Barrow's Travels, 390.

THE EASTERN COAST.

Natal—Delagoa—MOCARANGA—Mozambic, &c.—Adel.

ON leaving the colonial possessions, in this direction, first appear the Kaffers, or properly Kouffis, and the Tambookies, beyond whom there is deep obscurity. What is called the coast of Natal is followed by the bay of Delagoa. Further to the north, and opposite to the large isle of Madagascar, are Sabia, Sofala, and Mocaranga, regions better known from Portuguese narratives. The shores of Mozambico and Zanguebar, on the last of which is the city of Melinda visited by Vasco de Gama, are succeeded by the desert and obscure coasts of Ajan and Adel; the last bordering on Abyssinia, and completing the circuit of Africa.

Delagoa.

Of the bay of Delagoa, and the adjacent country, an account has recently been given; and it is frequently visited by vessels employed in the Southern whale fishery.* One of the chief rivers which enters the bay is the Mafumo: and the natives on the northern and southern banks follow distinct customs, the men on the former wearing singular helmets of straw. On the southern side are fourteen chiefs, subject to a king called Capelleh, whose dominions extend about 200 miles inland, and about 100 on the sea shore, computed by the natives in days' journeys of twenty miles each. Cattle and poultry are abundant, and may be purchased for a trifle; the favourite articles being blue linens, old cloaths, brass rings, copper wire, large glass beads, tobacco, pipes, &c. The fish are numerous, and excellent; and turtle is taken on Deer Island. The soil a rich black mould, sown with rice or maiz in December or January; the dry season lasting from April till October. There are many fruit trees and useful plants, particularly the sugar-

* White's Journal of a Voyage from Madras, &c. 1850, 4to.

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cane; but no horses, asses, nor buffaloes. The wild animals are the tiger, (panther) rhinoceros, antelope, hare, rabbit wild hog, with Guinea hens, partridges, quails, wild geese, ducks, and some small singing birds. The natives are Kaffers, that is pagans, of a bright black colour, tall and stout, go nearly naked, and are tattooed. They are a good humoured and harmless people, and fond of excursions on the river, there being what is called a king of the water, only yielding in power to Capelleh. Like the rest of Africa, the country is not populous; and Mr. White supposes that the inhabitants around this large bay may be from six to ten thousand.

The most civilized and powerful kingdom seems to be that of Mocaranga, absurdly called Monomotapa,* which has been styled an ex-

* This is the appellation of the monarchs, not of the kingdom. The Cuama or Zambezi, a large river, encircles the kingdom on the W. and N.; the larger or western part is styled Mocaranga, the eastern Botonga. See D'Anville's map of Africa, 1649. Sofala and Sabia were considered as parts of this monarchy. The king's residence was at Zimbao, about 240 miles inland. The accounts of Mocaranga are very imperfect when compared even with those of Congo, being derived from the general Portuguese historians, Barros and Faria, with Marmol, Linfchoten and Oforio. Vincent Le Blanc is not a credible traveller, but his story of Alfondi is well told. See Modern Universal History, vol. xv. edit. 1762. The remarkable history of Zinga, queen of Angola, is from Cavazzi.

M. le Grand, in his dissertations annexed to Lobo's voyage to Abyssinia, has extracted an account of Mocaranga, &c. from the *Ethiopia Oriental* of John dos Santos, a Dominican, printed at Evora, 1609. The great river Zambezi is said by the natives to rise in a vast lake, and to receive its name from a village not far from its source. It is very rapid, and in some places a league in breadth: at thirty leagues distance from the sea it divides into two branches called Luabo (the Suabo is a river which falls into the Zambezi), and the Guilimane, or river of Welcome Tokens, because Vasco de Gama there erected a stone pillar. The Delta consists of five mouths; but the Luabo is the chief stream, and is navigated as far as the kingdom of Sicambé, above Toré, where there is a cataract of stupendous height; and rocky rapids for 20 leagues to the kingdom of Chicoua, and the silver mines. The Zambezi inundates the country like the Nile; but in the month of April. From Matlapa in Mocaranga, which was the chief kingdom of the Monomotapa or Emperor, great quantities of gold are brought, being found in the neighbourhood of the vast mountain Fura or Afura; where it is said, that there are ruins of edifices built with stone and lime, while even the modern palaces are only constructed of wood and clay, covered with briars. Fura is 200 leagues from the sea. The forest of Thebé, on a river of the same name, affords trees of wonderful beauty and magnitude. Amber is said to abound on the coast (ambergis?) and there is a fishery for pearls near the islands of Bocças. Dos Santos argues that this was the Ophir of the ancients. As to Tartarish, the word in Scripture sometimes merely implies the ocean, Atlantic or Indian; but in other passages seems as clearly to denote Tartessus near Cadiz in Spain.

MOCA-
RANGA.

tensive empire, while the whole of Africa would not form an empire, equal to the Russian, and would certainly be found inferior in population. The soil of this country is said to be fertile, though the plains be exposed to great heat; while the mountains called Lupata, or the Spine of the World, form a great chain stretching from N. to S. covered with perpetual snow. The people are almost naked; and, like those of the western coast, superstitiously afraid of magical charms. According to the doubtful accounts of this country, the king, on days of ceremony, wears a little spade hanging by his side, as an emblem of cultivation. The children of the great are retained at court as hostages; and the king sends annually an officer to the provinces, when the people testify their fidelity by extinguishing their fires, and kindling others from the officer's torch. There are several queens, one of whom was protectress of the Portuguese, and another of the Moors. The emperor's guard is said to consist of women lightly armed. The Portuguese have here two fortresses, and another station near the mountains of Fura, which are said to abound in gold. It is to be regretted, that they do not publish accounts of their African settlements, which would be extremely interesting in the obscure geography of that continent; but they are of all nations the most illiterate, and the most determined enemies of their own celebrity.

Concerning their settlements on the eastern shore of Africa, the Portuguese observe a profound silence, as at the same time that they are very rich in gold, they are very weakly defended. An intelligent Portuguese has informed me that this silence is esteemed so strictly necessary, that an English vessel having been wrecked upon the shore in 1790, the survivors were sent off immediately in a small vessel to carry them to the Cape; and being forced to return, were confined and ill treated. Mani or Mono Motapa was the African appellation, signifying the king Motapa, who reigned when the country was first discovered. The states are now divided into small principalities; and the Portuguese have, in imitation of our conduct in Hindostan, excited or used the dissensions of the petty sovereigns, in order to extend their power, and enlarge their settlements. My Portuguese informant also assured me that there was no example of any kind of intercourse between the eastern shore and Congo,

as

as has been reported. Mozambic resembles Malabar, being a low country, with a range of mountains behind; while Mocaranga is a dry upland country. The mountain *Furado* was so called by the Portuguese, because it is *bored* with mines in different directions.*

MOCARANGA.

Any other intelligence concerning Mocaranga must be derived from ancient relations. That given by Faria y Sousa, in his history of Portuguese Asia, has been copied in the Collection of Voyages ascribed to Astley, and in Prevost's General History of Voyages. But some other materials there omitted may be used. In 1606 Caerden, a Dutch commodore, visited this country.† The emperor, by his account, ruled from Mozambic to the Cape of Good Hope. The guard of women is not impossible, as in Juida the women execute justice, ‡ and a guard of four hundred was sent to destroy the house of a criminal. The chief province was in an isle, or delta, between two branches of a large river, one called Cuama, and the other Espirito. This isle is about seven hundred and fifty French leagues in circuit, and the chief town was Benomotaxa. At that period there were many subject kings; and the emperor had a guard of two hundred dogs. The men are described as black, but well made; and many wore the skins of beasts, with the tails appendant, which in their idea gave an air of grandeur. Some were professionally warriors, others merchants: and the swords and arrows were of iron. The women were rather warlike, the young going entirely naked, except a very small apron of cotton, but the married women were clothed. Among the rivers that roll gold are mentioned the Panami, Luanga, and Mangiono. This upland country is subject to very cold winds from the southern pole.

The account of Dos Santos, 1609, is, not to mention its antiquity, of Sofala. little importance, being alike meagre and injudicious. § Sofala was then

* My informant recommended two books for some account of Mocaranga, which I have in vain endeavoured to see, both in France and England.

Chronica de S. Domingos de Portugal, por Fr. Lucas de S. Catharina, (printed about 1740.)

Sobre o Imperio do Mono Motapa, de D. Agostinho de Azevedo, MS.

† Voyages pour l'Etablissement de la Compagnie des Indes, Amst. 1716, tom. iii.

‡ Hist. Gen. des Voyages, iv. 323.

§ Etiopia Oriental, Evora 1609: or the French translation, Paris 1684, 12mo.

SOFALA.

a little maritime kingdom, dependent on that of Quiteve; and is watered by a river, which also passes through part of the wide territory of Mocara. But it is unnecessary to follow this description, as it has only the merit of being original, while that of Faria is more recent and exact. The number of the royal concubines, and of their children, rendered the succession to the crown dubious and sanguinary. The anniversary of the royal funerals appears to have been celebrated with great pomp, as in Egypt. Our author says that the chain of mountains called Lupata, or the Spine of the world, is about five leagues in breadth. Two tribes in the neighbourhood of Fort Teté, the Mumbas and the Zimbabwas, were accustomed to devour their captives, and even their slaves. A considerable part of the work is occupied with details, now antiquated, concerning Madagascar and other parts of Eastern Africa.*

In his voyage to the East Indies, Pyrard Laval, a dry and veracious traveller, of the beginning of the seventeenth century, gives some account of the commerce of Sofala, and amidst such obscurity, ancient authorities must be consulted. Having described Mozambique, and its constant intercourse with Goa, he proceeds in these terms.†

“About one hundred and twenty leagues from Mozambique, towards the Cape of Good Hope, is the kingdom of Sofala, where the Portuguese have a kind of fortrefs, but of little consequence, under the government of the captain of Mozambique, who there keeps a factor, and an

* It is to be regretted that Dos Santos, a Dominican friar, who resided some years in these countries, is a very weak and ignorant writer. He supposes the Orelana to be a different river from the Marañon, and that the West Indies are in the mouth of the river Plata! The king of Quiteve had, by his account, three or four hundred men for his guard, who are called *Infais*, that is butchers. The men used to twit their hair around two sticks, resembling horns; as they supposed they had a right to imitate this mark of distinction, given by nature to many male animals. Women were upon no account permitted to wear horns. The ordeals, and many other manners and customs, perfectly resemble, as may be expected, those of Congo. The king of Quiteve used to send four *mutumes*, or superior officers, to receive the tribute; the first, representing the monarch, never spoke; the second was called his mouth, as explaining his intentions; the third was called the king's eye, as he was bound to observe the value of the tributes; the fourth was the royal ear, to observe that the mouth did not exceed the directions. If we trust our weak and credulous author, a kind of condor, roc or huge bird of prey, is not unknown; and crocodiles frequent the river of Sofala. The sea-horses, by his account are of a large size, with a white star in the forehead. They have small thick feet, with five claws on those before, and four behind, and they have four tusks like those of a boar. It is probably a bad description of the large seal, called the sea-lion.

† Voyage de Pyrard, 1615. 2 vols. 8vo. vol. ii. p. 401.

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agent, to treat and trade with the people of the country. The captain *SOFALA*, himself was formerly established at Sofala; and even now the title of the governor bears Sofala, and not Mozambic, as being a more ancient and honourable designation. It is even said that Solomon drew from Sofala the gold for building his temple; and there is appearance that a great quantity has been drawn from the mines which are near the Portuguese fortress. The factor there established, collects great quantities of gold, and sends a part to Mozambic: all the gold which the Portuguese obtain only arising from the traffic with the kings and people of this country, who alone explore the rivers. There are also other factors in this quarter, for gold and other merchandise. About forty leagues from Mozambic, in the direction of Sofala, there is a river in the country of Couesme: otherwise called the Black River, where there is found a great quantity of gold in powder remarkably pure, which is called gold sand: and it is believed that this gold of Sofala, and of the River of Couesme, is the purest and best in the world. It is an admirable circumstance that in the mines of Sofala, and the empire of the Monomotapa, the gold dust is so pure that it cannot be further refined. I have seen a branch of pure massy gold a cubit in length, branched like coral, which had been found in the river of Couesme. This shews that gold runs in veins in the earth; and the water having carried off the earth, the hardest gold alone remained in its native form. This piece of gold was kept with great care, and was sent by the ship in which I embarked at Goa, to return to Portugal, in order to be presented to the queen of Spain."*

Our author then proceeds to mention an unsuccessful expedition, in order to discover the mines of gold and silver between Angola and Sofala; the Portuguese of Angola having received orders to attempt a junction, conceived to be possible in the dark geography of the time.

Even Buffon has been obliged to use the old narrative of Pyrard, the earliest French traveller in the East Indies, in his hints concerning the mineralogy of this interesting country. Da Cunha, in his late essay on the commerce of Portugal, has done little more than to inform us that the Portuguese still possess this country; and as he uses Lery for his

* It must be remembered that from 1580 till 1640 Portugal was incorporated with Spain.

SUFALA.

account of Brazil, there is little room to value the freshness of his information, and his work is rather declamatory than solid. "In Africa" says he, "Portugal possesses the strong places of Cacheu, Bissao, and others, on the river Gambia, on the coast of Nigritia, where a considerable slave trade is carried on to America; and farther a settlement in Malagueta, on the coast of Guinea.

"In the kingdom of Congo, where there are very rich iron mines, Portugal is not only mistress of the capital St. Salvador, of Loango, Embaca, and Cabinda, on the coast, beside many other places, but also of the whole commerce of those countries, to the exclusion of all other nations. In the same manner, Portugal has St. Paulo de Loando, and Benguela, in the kingdom of Angola."

He proceeds to mention the slave trade on the coast of Angola, the islands Azores, Madera, and Cape Verd, and the little isles of St. Thomas, and of the Prince, on the African shore. "On the coast of Zanguebar, Portugal possesses the important and rich settlement of Mozambic. The trade of this coast is naturally connected with that of the coast of Goa; most of the goods, found here, come from India, and European commodities scarcely find any market. Gold, ivory, and slaves, which are brought from thence, are the most lucrative goods in India, for which reason the ships from Goa may render their cargoes very complete, during their stay in Mozambic." The Portuguese settlements in Mocaranga are regarded as factories subject to the governor of Mozambic; but it is surprising to find them thus passed in silence in a work written expressly on the commerce of Portugal.

The Moors or Arabs are established in considerable numbers on the coasts of Ajan and Zanguebar, and seem to have invented the term of *Kefraria*, for in the Arabic *Kafre* signifies an unbeliever; whence the appellation, as being wholly vague and uncertain, should be dismissed from geography.*

Mozambic.

The kingdom of Mozambique or Mozambico is considered as subject

* It is probable there may be recent Arabian descriptions of Africa, which ought to be sedulously enquired after, as the Moors are intimately acquainted with the greater part of that continent. The *Kaffers*, so called in the south, ought to be distinguished by their native name Kouffi, Barlow, 219; and they cannot even pronounce the word *Kaffer*.

to the Portuguese, who had a considerable town of the same name, ^{MOSAMBEIC.} situated in an isle, the governor being dependent on the viceroy of Goa.* Zanguebar is said to be a marshy and unhealthy country, but abundant in elephants: it is chiefly inhabited by the Mocuas, partly pagans, partly mahometants. The little kingdom of Quiloa is also dependent on the Portuguese, with that of Mombaza, from which they were expelled in 1631, but regained their possessions in 1729. Melinda, a mahometan state, is also partly dependent on the Portuguese, who have a fortress in the city, and several churches. The coast of Ajan is chiefly Mahometan; and carries on a considerable trade in ivory, ambergris, and gold. Brava, a little aristocracy, pays tribute to the Portuguese, who have not been able to encroach on Magadasho, or on the kingdom of Adel, which last was dependent on Abyssinia, and is ^{Adel.} said to be a fertile country. This state was founded by a Mahometan prince, at the beginning of the sixteenth century; the capital being Auzagurel, standing on an eminence near the river Hawath, which comes from Abyssinia: and Zeila, on the Arabian gulf, is a considerable port. †

* Dapper says that this town was even supplied with rice, wheat, and other provisions, from Goa.

† "Hamilton and Barthema inform us that at Adel are found sheep entirely white, but the head of which is a brilliant black, with very small ears. The reader will call to mind that we have already mentioned a species with the same colours in Tibet. Fabroni says that a similar exists in the Alps, and supposes it to be of the origin of the domestic sheep: however this be, there is little doubt that this is a particular species unknown to naturalists. The sheep of Adel are described as having the neck swelled by a sort of dew-lap or goitre, hanging down to the ground; which completely proves the identity of the species with the ram of ancient marble, represented by Fabroni (*del ariete guturato*, Firenze 1792, 8vo. and iv. 269 of this work), and proves that this species exists in the three divisions of the ancient world. The tail (*Bruns Afrika*, iii. 14.) of the sheep of Adel is very large and broad, and sometimes weighs twenty-five pounds; their wool is almost as hard as the bristles of a hog." Walckenaer's *Notes on this Geography*, Fr. Ed. vi. 413.

THE ISLE OF MADAGASCAR.

THIS noble island is about 840 g. miles in length, by about 220 of medial breadth, being esteemed one of the largest in the world, though seemingly exceeded by Papua, and still more by New Holland, if the latter must be classed among islands. It seems to have been unknown to the ancients, for Ptolemy's geography of eastern Africa appears to terminate with the isle of Pemba, probably his Menuthias, he being a stranger to the islands of Zanzibar and Monfia, with the islands of Comoro. His Cape Prasum is probably some head-land, a little further to the south, discovered at a distance by some ship navigating these seas. However this be, the first certain mention of Madagascar is by Marco Polo, in the thirteenth century, who describes it by its present name, having received his knowledge from the Arabs.* Among other singularities, he mentions that large bird which is called *ruc* by the Arabs, and by the moderns the condor. It would seem that the Mahometan religion had made some progress: but the discoveries of the Arabs in Asia and Africa form an important object in geography, which deserves to be investigated by some writer eminently versed in oriental lore.

This island appears to have escaped the notice of Gama, who coasted along the African shore; and is said to have been discovered in 1506, by Lorenzo Almidia, whence perhaps it is called the isle of St. Lawrence. The French navigators in the reign of Henry IV. called it *Isle Dauphin*; and the latter ingenious people having repeatedly settled here, it becomes perspicuous from the accounts of their writers, while the Portuguese settlements remain in comparative darkness. Rochon† informs us that this island may contain about two hundred millions of acres of excellent land, watered by rivers and rivulets, from a long chain of mountains passing in the direction of the island, and

* Lib. iii. cap. 39.

† Voyage to Madagascar, 1792, 8vo.

separating the eastern from the western coast, but approaching nearer to the former. The two highest mountains are Vigagora in the N. and Botistmeni in the S. The scenery is strikingly grand and picturesque, diversified with precipices, cataracts, and immense forests. The flax, from the description, seems to approach that of New Zealand; other products are, sugar canes, cocoa nuts, bananas, tobacco, indigo, pepper, gum lacca, benzoin, amber, ambergris, &c. and the variety of valuable plants is prodigious. Cattle, buffaloes, and sheep abound. There are no lions, tigers, elephants, nor horses. Many of the most valuable minerals occur, among which are beds of pure rock crystal, often used for optical purposes, and erroneously styled Brazil pebble,* and it is said three kinds of gold ore, with topazes, sapphires, emeralds, and spotted jaspers, commonly called blood stones. The natives are rather above the middle stature, and are of various origins; some being negroes, others tawney or copper coloured; but the complexion of the greater part is olive; and it would seem that the Arabs, in very early times, penetrated very far into Africa, especially if the Kouffis or Kaffers above the Cape of Good Hope be of Arabian extract, as Mr. Barrow insinuates; a topic of curious enquiry, which might lead to new views of African population and manners. Rochon shews that propensity for savages which has recently disgraced French writers, and of which it is to be presumed the nation is radically cured, the bleeding having been proportioned to the fever. His arguments prove that savages are happy, because they have no care, nor forethought, which is very true, and so is every brute animal. The French settlement of Fort Dauphin is in the S. E. extremity of the island, and the French are chiefly acquainted with the southern part. Almost all the villages are built upon eminences, and surrounded by two rows of strong palisades, within which there is a parapet of earth, four feet in height; and sometimes there is a ditch, ten feet in breadth and six in depth. Their chiefs are only known by their red caps, worn by the common Moors; and of which there is a noted manufacture at Tunis. Their authority is inconsiderable, yet they are sometimes regarded as proprietors of the land, and

* It is quarried in huge blocks near the bay of Antongil, and also in the mountains of Ambohimenes in the northern part of the isle. Rochon, p. 347.

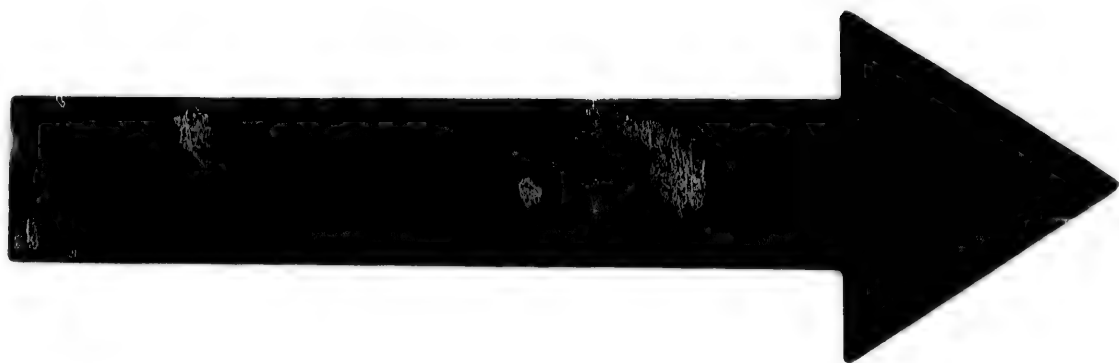
receive a small quit-rent. Writing is not unknown, and there are some historical books in the native tongues; but their learned men whom they call *ombiafer* use only the Arabic characters. In the province of Matatan are many magicians, greatly dreaded by the ignorant natives. The paper is made of papyrus, which the Madagasscs call *sanga-sanga*; and the ink is the decoction of a certain bark. The whole island is said to have been conquered by the Arabs about three hundred years ago: but their first settlements here and in southern Africa, may be nearly as ancient as those in Abyssinia, and of Mahometanism there are only faint traces. From the account of Rochon the traditions of many tribes point to a very early Arabian origin. The nobles are styled Roandri: and the Anacandri are descended from those and black women. The native blacks are classed as descendants of the ancient chiefs, and preserve their right of killing animals, but have some privileges unknown to the Ontzoa or third cast. The Ondeves, or *lost men*, are slaves by extraction. They suppose that seven women, originally created, were the mothers of the different casts; and there is a faint but singular resemblance of Hindoo traditions. Are the tawney tribes from Hindostan, or have these notions arisen from commerce or intercourse? Ideas of equality are unknown; and the lower casts never aspire to be butchers. Polygamy seems confined to the chiefs; the women are lively and chearful, and form the chief delight of their husbands. The achievements of the French in Madagascar have been detailed by many of their writers, from Flacourt to Rochon. The most singular perhaps is that of the Polish edventurer Benyowsky, who, pretending to establish an independent power among the natives, was attacked by a detachment sent from the Ile of France, and slain on the 23d of May, 1786.³ Few countries in the world are more deserving to be the seats of a powerful independent monarchy.

M. Rochon gives the following account of the Kimos from a dissertation of M. Commerçon.

“Those who are fond of the marvellous, and who no doubt must be displeased with me for having reduced the pretended gigantic stature

³ See his Memoirs, London, 1790, two vols. 4to. v. ii. p. 93, &c. and Rochon's Madagascar, p. 253.

of the Patagons to six feet, will accept, perhaps, by way of indemnification, an account of a race of pigmies who fall into the opposite extreme. I here speak of those dwarfs, in the interior parts of the large island of Madagascar, who form a considerable nation called, in the Madecasse language, Quimos or Kimos. The distinguishing characteristics of these small people are, that they are whiter, or, at least, paler in colour, than all the negroes hitherto known; that their arms are so long that they can stretch their hands below their knees without stooping; and that the women have scarcely any breasts, except when they suckle; and even then, we are assured, the greater part of them are obliged to make use of cow's milk in order to nourish their young. With regard to intellectual faculties, these Kimos are not inferior to the other inhabitants of Madagascar, who are known to be very lively and ingenious, though they abandon themselves to the utmost indolence; but we are told, that the Kimos, as they are much more active, are also much more warlike, so that their courage being, if we may use the expression, in the double ratio of their stature, they have never yet been overcome by their neighbours, who have often made attempts for that purpose. Though attacked with superior strength and weapons, for they are not acquainted with the use of gun-powder and fire arms, like their enemies, they have always fought with courage, and retained liberty amidst their rocks, which, as they are extremely difficult of access, certainly contribute very much to their safety. They live there upon rice, various kinds of fruits, roots, and vegetables, and rear a great number of oxen and sheep with large tails, which form also a part of their subsistence. They hold no communication with the different casts by whom they are surrounded, either for the sake of commerce, or on any account whatever, as they procure all their necessaries from the lands which they possess. As the object of all the petty wars, between them and the other inhabitants of the island, is to carry away on either side a few cattle or slaves, the diminutive size of the Kimos saves them from the latter injury. With regard to the former, they are so fond of peace that they resolve to endure it to a certain degree; that is to say, till they see from the tops of their mountains a formidable body advancing, with every hostile preparation, in the plains below. They then carry the
super-



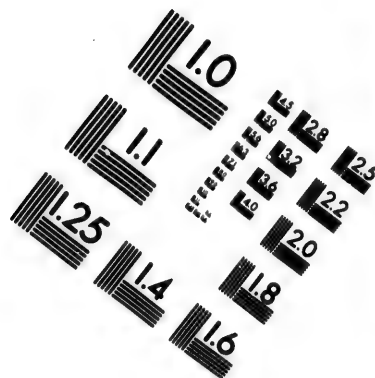
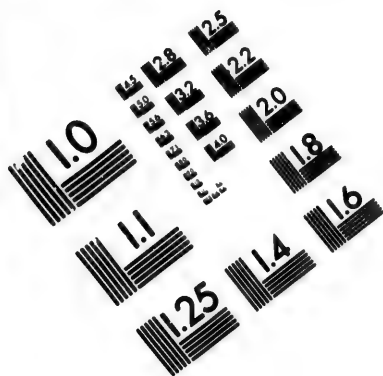


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superfluity of their flocks to the entrance of the defiles, where they leave them; and, as they say themselves, make a voluntary sacrifice of them to the indigence of their elder brethern; but at the same time denouncing with the severest threats to attack them without mercy should they endeavour to penetrate farther into their territories: a proof that it is neither from weakness nor cowardice that they purchase tranquillity by presents. Their weapons are assagays and darts, which they use with the utmost dexterity. It is pretended, if they could, according to their ardent wishes, hold any intercourse with the Europeans, and procure from them fire-arms and ammunition, they would act on the offensive as well as the defensive against their neighbours, who would then perhaps think themselves very happy to preserve peace.

"At the distance of two or three days journey from Fort Dauphin, the inhabitants of that part of the country shew a number of small barrows, or earthen hillocks, in the form of graves, which, as is said, owe their origin to a great massacre of the Kimos, who were defeated in the field by their ancestors.* However this may be, a tradition generally believed in that district, as well as in the whole island of Madagascar, of the actual existence of the Kimos, leaves us no room to doubt that a part at least, of what we are told respecting these people, is true. It is astonishing that every thing which we know of this nation is collected from their neighbours; that no one has yet made observations on the spot where they reside; and that neither the governor of the isles of France and Bourbon, nor the commanders at the different settlements which the French possessed on the coast of Madagascar, ever attempted to penetrate into the interior parts of the country, with a view of adding this discovery to many others, which they might have made at the same time.

"To return to the Kimos, I can declare, as being an eye witness, that in the voyage which I made to Fort Dauphin, about the end of the year 1770, the Count de Modave, the last governor, who had already communicated to me part of his observations, at length afforded me the satisfaction of seeing among his slaves a Kimo woman, aged

* I am surprised that M. de Commerçon did not endeavour to ascertain the truth of this fact by digging up the earth of some of these barrows. R.

about

about thirty, and three feet seven inches in height. Her complexion was ^{KIMOS.} indeed the fairest I had seen among the inhabitants of the island; and I remarked that she was well limbed, though so low of stature, and far from being ill proportioned; that her arms were exceedingly long, and could reach, without bending the body, as far as the knee; that her hair was short and woolly; that her features, which were agreeable, approached nearer to those of an European, than to an inhabitant of Madagascar; and that she had naturally a pleasant look, and was good humoured, sensible, and obliging, as far as could be judged from her behaviour. With regard to breasts, I saw no appearance of them, except the nipples: but this single observation is not at all sufficient to establish a variation from the common laws of nature.

"A little before our departure from Madagascar, a desire of recovering her liberty, as much as a dread of being carried away from her native country, induced this little slave to make her escape into the woods.

"Every thing considered, I am inclined firmly to believe in this new variety of the human species, who have their characteristic marks as well as their peculiar manners, and who inhabit mountains from sixteen to eighteen hundred fathoms high above the level of the sea.

"Diminution of stature, in respect to that of the Laplanders, is almost graduated, as from the Laplander to the Kimo. Both inhabit the coldest regions and the highest mountains in the world.* Those of Madagascar, where the Kimos live, are, as I have already observed sixteen or eighteen hundred fathoms high above the level of the sea. The vegetable productions which grow on these elevated places appear to be stunted, such as the pine, the birch, and a great many others, which, from the class of trees, descend to that of humble shrubs, merely because they have become alpicoles, that is to say, inhabitants of the highest mountains."

"To this extract from Mr. Commerçon's Memoir on the Kimos, I shall add a few observations by M. de Modave on the same subject.

"When I arrived," says he, "at Fort Dauphin, in 1768, an ill-written memoir was transmitted to me, which contained some particulars concerning a singular people, called in the language of Madagascar,

* Very erroneous, the mountains in Lapland being inconsiderable. P.

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the Kimos, who inhabit the middle of the island, about the twenty-second degree of latitude. I had heard mention of them several times before, but in so confused a manner that I scarcely paid any attention to a fact which deserves to be cleared up, and which relates to a nation of dwarfs, who live in society, governed by a chief, and protected by civil laws.

"I had found in the relation of Flacourt a passage respecting this nation; but it made no impression on my mind, because Flacourt rejects the history of these pigmy people as a fable, invented by the players on the *berraou*, a kind of buffoons, or rather impostors, who spend their time in reciting absurd tales and romances.

"Flacourt calls these dwarfish people pigmies, and mixes their history with that of a pretended race of giants, who, as the ancient tradition of Madagascar assures us, occasioned formerly great ravage in the island. Flacourt relates, after these players on the *berraou*, that the pigmies, some time ago, invaded the country of Anossi, from which they were driven by the Etanos, who are the original inhabitants of that district. The Etanos surrounded the pigmies on the banks of the river Itapera, and having massacred them all, afterwards heaped together in that spot a multitude of stones, to cover the bodies of their enemies, and to serve as monuments of the victory which they had gained over them.

"After procuring at Fort Dauphin and the neighbourhood all the information possible, I resolved to send a detachment to discover the countries of these pigmies. The detail of this expedition is consigned to my journal; but, either on account of the infidelity of the guides, or their want of courage, it was not attended with success. I had, however, the pleasure to ascertain the existence of a nation of dwarfs, who inhabit a certain district of the island.

"These people are called Quimos or Kimos. The ordinary height of the men is three feet five inches, and that of the women a few inches less. The men wear their beards long, and cut in a round form. The Kimos are thick and squat; the colour of their skin is lighter than that of the other islanders; and their hair is short and woolly. They manufacture iron and steel, of which they make launces and assegays.

These

These are the only arms which they employ to defend themselves from Kimos. their enemies, who attempt to carry off their cattle. When they perceive bands of travellers preparing to traverse their country, they tie their oxen to trees on the frontiers, and leave other provisions, in order that these strangers may find the means of subsisting. When the strangers, however, are so imprudent as to molest them, by behaving in a hostile manner, and are not contented with the presents usual in the like circumstances, the dwarfish Kimos know how to defend themselves bravely, and repel by force those who have the temerity to attempt to penetrate into the valley where they reside, and to which access is extremely difficult.

"Remouzai, who, in quality of captain, followed the father of the chief Maimbou, in the two unfortunate expeditions which he undertook against these people, in order to carry away a part of their flocks, and afterwards fell them at Fort Dauphin, told me, that he owed his safety merely to the knowledge he had of the high and steep mountains by which their valley is surrounded. Remouzai had been several times among the Kimos, and was employed as a guide by Maimbou's father, when he ventured to attack them. The first incursion had no success, but the second was much more fatal: Maimbou's brother was killed; his small army was put to flight; and the number of those who escaped these pigmies was very inconsiderable. Notwithstanding all my researches, I could never find any person, except Remouzai, who was able to give me any certain accounts respecting these two incursions.

"Maimbou, with whom I had a good deal of intercourse, for the purpose of procuring provisions to Fort Dauphin, was not old enough to accompany his father in this expedition; but he had conceived such an aversion to the Kimos, that he fell into a violent passion whenever I mentioned them in his presence; and he wished me to exterminate that race of apes, for such was the injurious appellation which he always bestowed upon them.

"A chief of the Mahaffales, a people residing near the Bay of St. Augustine, who came from a chief in the neighbourhood of the fort, with a view of exchanging silk and other merchandise for oxen, said, in the hearing of one of my officers, that he had been several times in the

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country of the Kimos, and that he had even carried on war against them. This chief added, that for some years these people had been harassed by their neighbours, who had burnt several of their villages. He boasted, also, of having in his possession a man and a woman of that race who, he said, were about the age of twenty or twenty-five.

“ From the accounts of this chief and Remouzai, I am inclined to think, that the valley of the Kimos is abundant in cattle and provisions of every kind. These little people are industrious, and apply with much skill and labour to the cultivation of the earth. Their chief enjoys a much more absolute authority, and is more respected than any of the other chiefs in the different districts of Madagascar. I was not able to learn the extent of the valley which they inhabit. I know only that it is surrounded by very high mountains; that it is situated at the distance of sixty leagues to the north-west of Fort Dauphin; and that it is bounded on the west by the country of the Matatanes. Their villages are built on the summits of small steep mounts, which are so much the more difficult to be ascended, as they have multiplied those obstacles that render approach to them almost impracticable. The chief of the Mahaffalles and Remouzai did not agree respecting two points which are particularly worthy of being ascertained. The general opinion of the people of Madagascar is, that the Kimos women have no breasts, and that they nourish their children with cows milk. It is asserted, also, that they have no menstrual flux; but that at those periods when other women are subject to this evacuation, the skin of their body becomes of a blood-red colour. Remouzai assured me that this opinion was well founded; but the chief of the Mahaffalles contradicted it. We must, therefore, suspend our judgment on this head; and be cautious in giving credit to phenomena which appear to deviate so much from general rules, and to extend to a certain number of individuals only.

“ I procured a Kimo woman, who was taken in war, some years ago, by a chief of the province of Mandrarey. This woman is rather of a tall stature, considering the general measure allowed to the females of her nation; yet her height does not exceed three feet seven inches. She is between thirty and thirty-two years of age; her arms are very long; her hands have a great resemblance to the paws of an ape; and her

her bosom is as flat as that of the leanest man, without the least appearance of breasts. My little Kimo was remarkably thin and meagre when she arrived at Fort Dauphin; but when she was able to gratify her voracious appetite, she became extremely lusty; and I am of opinion, that when she is in her natural state, her features will be well worth a careful observation. The chief who sold me this Kimo woman told me, that he had a Kimo man at home, and that he would endeavour to send him to me.

"Had the enterprise I undertook a few months ago succeeded better, I should certainly have embraced the opportunity of sending to France a male and female of these pigmies; but I hope to be more fortunate in future. It is certainly nothing wonderful to meet with dwarfs in a country so vast and extensive as the island of Madagascar, the surface of which contains various climates, and abounds with a multitude of different productions; but a real race of pigmies, living in society, is a phenomenon that cannot well be passed over in silence."

"To these accounts of M. de Modave, and M. de Commerçon, might be added that of an officer who procured a Kimo, whom, as he told me, he wished to carry to France; but M. de Surville, who commanded the vessel in which he had taken his passage, would not permit him."*

The knowledge that we have of the plants of Madagascar is chiefly derived from a few French authors; of these Flacourt is the principal, having given a list of three or four hundred. Unfortunately however he mentions only their native names, and describes them by fancied resemblances in their forms or medical properties to those of Europe. Hence the greater part are wholly unintelligible, nor is it without some hesitation that we give the few following Linnæan species, as probably included in the catalogue of the above-mentioned author.

Of esculent plants there are the rice, banana, yam, *nymphaea lotos*, several kinds of dolichos or kidney bean, gourds and water-melons, and cocoa nuts. The fruits are pine apples, tamarinds, oranges, and pomegranates. The spices and other condiments are common and betel pepper, ginger, turmeric, cinnamon, and sugar. The Indian fig grows here, as also does the ebony, the bamboo, the cotton, and indigo.

* Rochon's Voyage to Madagascar, London 1792, 8vo. p. 163.

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A few Madagascar plants have been obtained of late years, of which the only species interesting to the general reader are the Mauritanian mulberry with green fruit, and the gummiphora *Madagascariensis*, whose juice concretes into an elastic gum exactly similar to the caoutchouc of Cayenne.*

* "There is perhaps after Notasia or New Holland, no country more curious and singular for the naturalist, than the island of Madagascar. Commerçon says somewhere, that the plants of Madagascar are peculiar to that isle, and differ from those on the opposite coast of Africa. Many quadrupeds which have only been found in this country, lend more weight to this assertion; such is the singular animal called the aye, *Sciurus Madagascariensis* of Linnæus, which differs sufficiently from all the squirrels to form a distinct class, under the name of cheiromis. All the makis, the grey, the brown, the Indri, the Mococo, *lemur murinus*, *mongox*, *indris*, *catta*, *laniger*; the *tendrac* and the *tanræ* have only as yet been found in this isle. Might it not be inferred from this singularity in its natural products, that it has never joined the continent of Africa, or that it must have been separated before the creation of these animals? The mangabey, *simia Æthiops*, an ape of the class of guenons, is according to Buffon originally of Madagascar; but this is not certain, and the country of this animal is not perfectly known: we have already placed it, after Browne, among the animals of Darfur. The wild boars of Madagascar are of the species called *sus Æthiopicus*, common at the Cape; while the *sus Africanus*, or wild boar of Cape Verd, seems peculiar to the west of Africa on the north of the Senegal; and the *sus Guineensis*, in Senegambia and adjacent countries. The oxen of Madagascar are zebu, they become very large, and Bucquoy informs us that there are some that weigh seven or eight hundred pounds. This author has seen three species or varieties, the one with horns, the other without; and others which have, as he pretends, hanging horns, and which appear to be only fastened by the skin.

"At Madagascar are found numerous black tourmalines of Haüy, being the schorl of Madagascar of ancient mineralogists." Walckenaer's Notes on this Geography Fr. Ed. vi. 422.

THE SMALLER AFRICAN ISLANDS.

*Pemba.—Comoro.—Mauritius and Bourbon.—Kerguelen's Land.—St. Helena.—
Ascension.—Cape Verd Islands.—Canaries.—Madeira.*

THESE shall be traced from the eastern coast towards the west. Those in the Red Sea are too minute for general geography; and the isle of Socotra has already been described under Arabia, to which it belongs. The islands of Pemba, Zanzibar, and Monfia, are opposite to the coast of Zanguebar. Pemba is said to be about 100 miles in circumference, governed by a king, who pays tribute to Portugal; to which power the two others are also said to be subservient. At a considerable distance to the east are the isles of Mahé and Alm'irante, interspersed with many rocks, and of small account.

The islands of Comoro are four in number, of considerable size, particularly Angaziza, or the greater Comoro. That of Anzoan* has a convenient harbour, sometimes visited by ships passing to India. These isles are governed by Pagan or Mahometan chieftans, tributary to the Portuguese; and are reported to be very fertile in rice, oranges, lemons, sugar, cocoa, and ginger, the natives carrying on some trade with the Portuguese of Mozambico. The domestic animals resemble the European.

To the east of Madagascar are the Islands of Mauritius or France, and Bourbon, French settlements well known in the commercial world.† The Isle of France has a tolerable port, the centre of the oriental force and commerce of the French. The Isle of Bourbon, colonized in 1654, is about fifty leagues in circumference, of a circular form, rising to high mountains in the centre; and there is a noted volcano, difficult

* This isle, also called Henzuan, Juhanna, is elegantly described by Sir William Jones in a paper inserted in the Asiatic Researches. It is peopled by Arabs.

† A prolix history of Mauritius was published in 1801, by Charles Grant Viscount de Vaux. The Isle of Bourbon has been lately called *Reunion*.

MAURITIUS
AND BOUR-
BON.

of access, at the summit of a mountain a league from the sea: the eruptions are frequent and continual. Mauritius, or the Isle of France, was first possessed by the Dutch, who abandoned it in 1712, and the French settlement began to acquire some stability under Bourdonnais in 1734. There are two crops every year of wheat and Indian corn, but manioc was the food of the negroes. The Isle of Bourbon produces sugar-canes; and in both the cattle are numerous. In 1766, M. Poivre, author of the *Voyage of a Philosopher*, was governor of these isles, and the advantages of appointing men of science to such stations was evident from his introduction of the bread-fruit tree, and also of the nutmeg and cinnamon.*

The isle of Reunion, formerly called Bourbon, was discovered by the Portuguese, who named it Mascarenhas after the admiral. It is twenty leagues in length, by fifteen in breadth; the chief town St. Denis. This isle is said to produce annually more than fifty-five thousand quintals of wheat, and about the same quantity of maize; while the coffee may amount to three millions of pounds. There are ebony, benzoin, and other precious trees, with oranges, lemons, bananas, tamarinds, and other fruits. The population exceeds six thousand whites, and twenty-six thousand negroes. This isle supplies that of France with grain and other provisions.†

The isle of France was called Mauritius by the Dutch, who abandoned it in 1712, finding the Cape of Good Hope a more advantageous position. In 1715 it was seized by the French. The soil is generally stony and barren, and the chief produce is sugar.

The French have a little establishment in the isle of Sechelles, also called Mahe, and at Praslan, where some convicts have been sent; but there is no account of the progress in the colonization.‡

* See Rochon's Introduction to his *Voyage to Madagascar*, in which he pretends to point out some mistakes of M. d'Après, the celebrated hydrographer of the Eastern shores. To the north of these isles are several shoals. The isle of Sechelles, one of the *Almirantes*, is well wooded, but only inhabited by tortoises and alligators: the French formed there a small establishment for the cultivation of nutmegs and cloves. The remote isle of Diego Garcia is, by our author's account, in the form of a horse shoe; and there is a good haven. lb. liii.

† *Statistique de la France par Herbin*, Paris 1803, 8vo. vii. 144.

‡ *Stat. de la France*, vii. 147.

A youthful voyager has recently published what he calls an Account of the four principal Islands of the African Seas.* The maps of the isles Reunion and France form the most essential objects of the work, that of the former being full of singular volcanic objects, and numerous masses of basaltic columns, of various forms and directions. Those on the river St. Denis are particularly curious; and the volcano of Mascarenha, the ancient and proper name of the island, presents many singularities which seem to be delineated with great exactness. Our author proceeded with Baudin as far as the island of Mauritius. At Teneriffe he observed fields of the *batatas*, or sweet potato, a creeper which runs along the ground, and which must not be confounded with the potato.† He repeats his account of the volcano of Cahorra, which first appeared, about seven years ago, to the S. W. of the Peak. In the volcanic rocks of the isle called Reunion, he has observed that the action of the sea has great effect, while in the basaltic columns of Ireland no great degradation is observable. M. Bory thus describes the principal summit of the volcano.‡ “The small hill, at the basis of which we were now arrived, after so much fatigue, is about a hundred and sixty feet in height. It did not appear to us truncated, and we soon climbed it, though the sides be very steep, so as to form with the horizon an angle of more than eighty degrees. They are composed of little currents of glassy scoriæ, spongy, very light and brittle, and exteriorly of a brown colour, with metallic or red reflections from the pores. This volcanic substance is easily broken with the fingers, and reduced to brilliant dust, which resembles aventurine. From the top of the Piton we perceived, on the right and the left, parts of the circumference of two immense craters, which induced us to call this the central hill. The access of this central hill is nearly perpendicular; and on the summit is a round hole about forty fathoms in diameter, and eighty feet in depth. The bottom of this crater was filled with fragments of greyish lava, piled without any order, while the sides were very thin and much scorified on the outside; and were not covered with any sort of varnish, nor with that lava in tears or drops, which in

* Bory Voyage dans les quatre principales Iles des Mers d'Afrique, Paris 1804, 3 vo's. 8vo..

† *Convolvulus batatas*, L. *Ipomœa batatas*. Lam. Illustr. des genres.

‡ ii. 231.

REUNION
AND
FRANCE,

general clothe the other vents. They are formed of confused fragments of different hard and grey lavas, compact, or porous. From some rents there arose light vapours, leaving yellow traces of sublimated sulphur, on the spots exposed to their contact. At one place, where a projecting rock formed a cornice, stopping for a while one of these cords of vapour, it was dissolved in drops of water to a considerable quantity.

"In general a very false idea is formed of volcanos, and many works which pretend to describe them, paint them very different from what they are. If we believe many travellers, on the brink of a crater, the eye cannot without terror penetrate the vast depth. As, before I had seen volcanos, I was persuaded that their chief focus was not their summit, and that the substances which they eject were conveyed from a great depth, I believed that the vents of a burning mountain were immeasurable precipices. I had not yet reflected that when an eruption happens lava must remain in the interior of the crater, forming a solid bottom when the volcano ceased to burn, and which is broken by the following eruptions.

"Meanwhile we asked each other whence the sulphureous vapours could proceed, which annoyed us from time to time, and sought to guess what could produce the noise we heard, when one of our company, who had advanced towards the left, stopped short with strong signs of terror. On hearing his inarticulate cries, I imagined that he must see some extraordinary object, which he could not find words to express. The negroes around him stood petrified. I advanced, and at the sight of a wonderful spectacle very difficult to describe, I was seized with amazement in my turn, and could not explain my sensations. At our feet, from the bottom of an elliptic abyss formed like a tunnel of vast extent, and of which the sides of burnt lava threatened a speedy ruin, issued two contiguous *gerbes*, or perpendicular spouts, like a Chinese tree in artificial fire-works; but here the fiery matter seemed like tumultuous waves, darted to the height of more than a hundred and twenty feet, dashing against each other with a bloody light, in spite of the splendour of an unclouded sun.

"One of these fiery spouts was perpendicular, while the other somewhat oblique seemed at intervals to diminish or increase. Rocks not yet melted,

melted, in sharp fragments, distinguishable on the purple of the burning waves by their deep black hue, were pushed with violence from amidst the melted matter in which they had passed from the cavities of the mountain, and fell with great noise, describing a long parabola. A continual noise, resembling that of a vast cataract, accompanied this majestic scene, which filled the soul at once with terror and admiration."

REUNION
AND
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The account of several eruptions of this grand volcano is also interesting. The lava sometimes gives indications of containing mineral alkali. In the eruption of 1800, the lava fell in three torrents into a ravine, about eighty feet in depth, forming a horrible cascade, the middle, or hottest torrent being, by the account communicated to our author, as fluid as water, while the two others seemed to have the consistence of honey. When the lava joined the sea, the scene was tremendous, but there is no hint of any appearance of basaltic columns. The spouts of fire often produce the phenomenon of cords of lava, twisted in different directions. Sulphur appears in what our author calls basalt; but a Neptunist would, even from the locality, declare it to be compact lava, having no connexion with the true basalt of the Egyptians.

Far to the south lies Kerguelen's Land, so called from a recent French navigator; but by Captain Cook the Isle of Desolation. This region must be classed among the African islands, as it approaches nearer to that continent than to Australasia, which may however claim the small islands of Amsterdam and St. Paul, only frequented on account of the seal fishery. Kerguelen's Land is described and delineated in the last voyage of Cook, to which the curious reader is referred. In wildness, and iron-bound sterility, it rivals New Georgia, and the southern Thule. Proceeding towards the west are several other desert islands surrounded with the floating ice of the antarctic ocean, and chiefly discovered by Marion in 1772. That of Tristan da Cunha is unknown to recent accounts.

Kerguelen's
Land.

The south is here the region of cold and desolation, and on proceeding towards the north the scene improves. St. Helena is a beautiful island, possessed by about three hundred English families, the governor residing in a fort with a small garrison. There is a village, with a church, in Chapel valley. The planters are occupied with their cattle,

St. Helena.

St. Helena. hogs, and poultry; but when East India ships arrive, each house becomes a little tavern. This interesting isle was discovered by the Portuguese, who stocked it with animals and fruit trees; but there was no settlement when the English took possession about the year 1600. There is only one harbour, which is difficult of access. The isle of Ascension, between Africa and Brazil, was discovered in 1508; and has an excellent harbour, frequented by homeward bound ships, who here find turtle and sea-fowl. This island is of considerable size, but mountainous, and the soil a barren sand.

**St. Thomas,
&c.**

On approaching the African shore, to the north of Congo, and passing the neglected isle of St. Matthew, where the Portuguese have a small settlement, first appears the isle of Annabon, followed by St. Thomas, Prince's Isle, and that of Fernando Po. The Isle of St. Thomas was discovered by the Portuguese about 1460, and settled by them in despite of the climate, which is foggy and singularly unhealthy. But the soil is remarkable strong and fertile, domestic animals abound, and the produce of sugar is prodigious. There is a bishop, who is a suffragan of Lisbon. The town Pavoacan is on the eastern side of the island. Prince's island is also fertile, with a good harbour, and a town of about two hundred houses on the northern shore: it is inhabited by about forty Portuguese and 3000 negro slaves. Fernando Po seems destitute of any good harbour, and abandoned to the goats and seals; but the Spaniards retain the nominal possession.

**Cape Verd
Islands.**

Several other small isles arise on the African shore; and it is probable that in ancient periods these were still more numerous, but the sand, which has blocked up many of the rivers, must have united the islands, particularly at their mouths, with the continent. The first distinguished group in this quarter is that opposite to Cape Verd, whence it has received its name. These isles were discovered by the Portuguese in 1446. They are ten in number, the two largest being that of St. Jago in the S. E. and St. Anthony in the N. W. The air is hot and unhealthy; and most of the isles stony and barren; the chief trade being in salt, and goat skins. Some produce rice, maiz, bananas, lemons, oranges, citrons, with cotton, and sugar canes; and there is abundance of poultry. Ribira, the chief town and bishopric, is in St. Jago.

Of these islands are reckoned ten, of which there are four to the E. CAPE VERDE ISLANDS.
Santiago, Mayo, Bonavista, and Salt Isle; four towards the N. W. St. Nicholas, St. Lucia, St. Vincent, and St. Anthony; while two are rather detached towards the S. those of Brava and Fuego.* The air is esteemed hot and unhealthy, rain being very rare; but a N. E. breeze commonly rises before four in the afternoon. Some of these isles are barren, while others produce rice, maiz, bananas, oranges, with some cotton and sugar: it is said that the goats produce thrice a year, and the vines twice. There is abundance of poultry and rabbits, and turtles abound on the shores.

The chief island is that of Santiago, by the best maps about forty B. miles in length, by twenty in breadth. There are many mountains, yet it has been reckoned among the most unhealthy of these isles. Here are found the custard-apple, the papah, and other tropical fruits. The capital, called Reveira or Santiago, has a bad road, and ships rather frequent Porto Praya, which has even of late become the residence of the governor.† The city was taken by Sir Francis Drake in 1585. There are about three hundred houses built of rough stone. The inhabitants were esteemed proud and dishonest.

Bonavista is remarkable for a shoal in the vicinity, sometimes pernicious to our East India vessels, who often visit Santiago. This isle is said to produce wild cotton and indigo. Mayo is of a dry and barren soil, yet there used to be considerable numbers of cattle; guinea fowl abound in the woods, and dry savannahs; this isle also produces great quantities of salt. This product is however yet more abundant in the next isle, which thence derives its name, and is not a little frequented on account of that commodity.

St. Nicholas presents little remarkable except good water. The women are noted for industry, and the centre of the isle presents many fertile vales. St. Lucia is, by some accounts, uninhabited. St. Vincent has a fair large road called Porto Grande, with a rock like a tower in the centre. The fish are numerous and excellent, but the land barren, and probably is still uninhabited. The isle of St. Anthony produces cotton

* For the hydrography of these isles, see the *Voyage par ordre du Roi*, Paris 1778, 4to. i. 160. ii. 90. † Ibid.

and

Of

CAPE VERD ISLANDS. and indigo, with the tree which yields the resin called dragon's blood; and some assert that topazes are found, and appearances of silver. Provisions are here abundant.

Brava is of little consequence; and the island of Fuego, or in the Portuguese dialect Fogo or of Fire, is so called from a remarkable volcano. This isle seems to be a single mountain, or perhaps a group with the volcano in the centre. The fire appears to be always active, and great rocks are cast to such a height, that the noise may sometimes be heard to the distance of eight leagues. The height is said to be such, that two layers of clouds are often observable. The sulphur is sometimes said to descend in torrents, and showers of pumices and ashes are carried to a great distance. This isle being almost destitute of water is mostly peopled by negroes.

Canary Islands.

Peak of Tenerife.

Far to the north the Canary Islands, or Fortunate Islands of the ancients, form an interesting range from west to east. They were conquered by the French in 1402 under the celebrated Jean de Bethencourt, afterwards styled king of the Canaries*. The isle strictly called Canary is smaller than Fuerteventura, and Tenerife. The latter is the most remarkable, deriving its name, according to Glas, from *thener*, a mountain, and *if*, white. In the recent astronomical voyage of Verdun de la Crenne there is an accurate account of the Peak of Tenerife, which was found 1742 toises above the level of the sea, or about 5000 feet lower than Mont Blanc. It is said to be visible at the distance of *eighty* leagues†. This celebrated mountain cannot be ascended, on account of the snows, except from the middle of July to the end of August. First occur pumices, interspersed with obsidian of beautiful and various colours, followed by broken lava. The summit resembles a cone placed on a table, or rather small base; and can only be ascended

* Histoire de la premiere decouverte et conqueste des Canaries: faite dès l'an 1402 par Messire Jean de Bethencourt, Chambellan du Roy Charles VI. Ecrite du temps mesme par F. Pierre Bontier Religieux de S. François, et Jean le Verrier, Prestre, domestiques du dit Sieur de Bethencourt. Paris 1630, 8vo. See also Glas's History of the Canary Islands; London, 1764, 4to.

† Tome i. p. 121: supposing the height to be 1742 toises, the summit might be visible at sea at the distance of 35 leagues.

by a zig-zag path on the south. The cold is extreme; the nails become black, and the hands and feet swell. In the middle of the summit is a deep reverfed cone, called the cauldron, about fifty fathoms in diameter, and bordered with hideous calcined rocks, mostly red or white, the perpendicular depth being about 150 feet: at the bottom are perceivable reddish spots, upon a kind of white earth like plaster, and mingled with sulphur, which is sometimes so volatile as to evaporate from paper, and if folded up will escape after burning the paper and the pocket. Around are many little mouths, from one to four inches in diameter, which at short intervals respire, as it were, a thick hot fetid smoke. The largest hole, about eight inches in diameter, is within the crater, exhaling with a sound like the bellowing of a bull; and the smoke is so hot as instantly to burn the hair of the hand. Yet the rocks immediately adjoining are covered with wet moss, like those by the side of a cascade. On descending about mid-way is visited a cave in the midst of the lava, which seems to pierce a considerable depth, and to be paved with ice, above which are about two feet and a half of the purest water, but extremely cold: and there seems an opening of great depth, at one side of the cave, through which it is said some animals ascend to drink the water. In winter this cave is blocked up; and the summit is covered with a thick snow resembling polished silver.

The ancient inhabitants of the Canaries were called Guanches by the Spaniards, and were strangers to the use of iron, their weapons and instruments being of what they called *tabona*, or black obsidian. The chief trees are wild olives, cypresses, laurels, and pines of two kinds. It was reported by Spanish writers that there was a tree in the isle of Ferro which gathered the vapours, so that, dropping from the leaves, the inhabitants were thus supplied with water. The product of these islands is wheat, barley, and oats; and the excellent Canary wine is chiefly from Tenerife and Palma, which also yield considerable quantities of sugar; while Gomera is noted for silk; and the tree yielding the gum called dragon's blood is not uncommon.* They have most European domestic animals. The capital of the seven inhabited islands

* Ibid. 103.

CANARIES.

is the town of Palma, in the isle of Canary: but Tenerife is the most populous. The inhabitants are computed at 140,000; of whom 64,000 belong to Tenerife, in which isle the Governor usually resides, though the royal audience, of which he is president, be established at the capital of Canary. There is considerable internal trade with Tenerife: and the wine is chiefly exported by the English. Filtering stones, from the isle of Canary, and from Fuerteventura, also form an article of traffic.

An ingenious young officer, M. Bory, has lately published a large account of the Canaries,* but unfortunately filled with ridiculous theories concerning the Atlantes; and the remainder is chiefly borrowed from Viera's Spanish history of these islands, published at Madrid in 1773.† Mr Bory's account of the mineralogy, a science in which he is conversant, is however original. The productions are mostly volcanic, but as he remained only a very short time, the catalogue is far from complete. His account of the volcano of Cahorra, not far from the Peak of Tenerife, from the report of Mr. Coloman, a planter, is curious, though there be nothing peculiar. Our author's maps form, perhaps, the most valuable part of his work, if they be not, as often happens, partly supplied by imagination.

The accounts of the manners of the Guanches, the ancient inhabitants of these islands, seems to be compiled with considerable care, though the arrangement be injudicious. They were strangers to the use of metals, but had weapons made of compact lava. They wore their beards, and were lightly clothed, but the women had a decent attire. Music and the dance formed the great amusements. Our author produces some specimens of their songs, but his manner is so vague and declamatory, that little confidence can be placed in his translations; and the same unfortunate objection may indeed be made to the whole of his description, which, to a judicious reader, will appear very unsatisfactory, and rather a mere excursion of a youthful imagination.

MADEIRA.

The island of Madeira is chiefly remarkable for excellent wines, being about 18 leagues in length by seven in breadth.‡ The capital, Funchal,

* Paris 1803, 4to.

† 2 vols. 4to.

‡ Voyage de Verdun, i. 58.

the residence of the governor and bishop, is in a fertile vale, on the south side of the isle, a handsome town, with about eleven thousand inhabitants, there being about 64,000 in the whole island. The chief trade is with the English, who export about ten or twelve thousand pipes of wine annually; the remainder, about seven thousand, being consumed in the country. The richest merchants are English or Irish Catholics. The interior consists of high mountains, visible at the distance of twenty leagues. To the N. E. is the small isle of Porto Santo, only remarkable in the history of Portuguese discovery. It is however a fertile little isle, with a good harbour, sometimes visited by East India ships.

MADEIRA.

INTERIOR PARTS.

Of the interior parts of Africa, Darfur alone may be said to be distinctly known; while concerning the remainder, there are only vague reports. Mr. Browne, to whose independent love of science we are indebted for the first account of Darfur, informs us that Cobbè, the capital of this country, is a pleasant little town, full of trees of different kinds; and, during the rainy season, the ground on which it stands is surrounded by a torrent.* The inhabitants are almost all merchants and foreigners. The other more noted towns of the kingdom are Sweini, Kûrma, Cubcabîa, Rîl, Cours, Shoba, Gidid, Gellé; for a description of which the reader may consult the original work. The merchants are chiefly from Upper Egypt, Tunis, and Tripoli.

DARFUR.

The rains fall in Darfur from the middle of June till the middle of September; and the cares of agriculture begin with the rains.† The goats are more numerous than the sheep, whose wool resembles hair. Cows are abundant, but the milk not very palatable; camels are numerous. The lion, the leopard, the hyena, wolf, jackall, and wild buffalo, are too familiarly known; but the tiger is not mentioned; and Mr. Browne has expressed his opinion as already stated, that this terrible animal

* Travels, p. 234.

† As in New Spain, the rain which is very heavy, and accompanied with lightning, falls most frequently from three in the afternoon till midnight.

DARFUR. is not a native of Africa. To these may be added the elephant, the rhinoceros, the giraf, the hippopotamus, and the crocodile. Perhaps the rhinoceros with one horn, called by the Arabs Abukurn, or the father of the horn, may have given rise to the fable, if such it be, of the unicorn. The antelope and ostrich are also common. For the other animals Mr. Browne's very intelligent work may be consulted. The copper brought from the mines in the south is of excellent quality, and iron is abundant; but the little gold is brought from the countries in the E. and W. Among the trees are the tamarind or fruit of India, oriental plane, sycamore of Egypt, and others enumerated in the original work.

The government is regal and hereditary; yet a battle often decides the succession. The army cannot exceed two thousand men, whence our author concludes that the population may be about two hundred thousand souls. Allowing the justness of this calculation, in Abyssinia, where the royal army amounts to twenty thousand, the population might be two millions. The manners of the people of Darfur, in regard to the intercourse of the sexes, are dissolute in a supreme degree, and a modest woman would be regarded as a natural curiosity.

For the relations of the Jelabs, or travelling merchants, concerning other countries in the interior of Africa, the subsequent chapter may be consulted.

Fezzan, &c. The journey of Hornemann from Cairo to Fezzan contains little remarkable. The petrified wood, found in the desert, sometimes presents entire trunks of trees more than twelve feet in circumference, sometimes only branches and twigs, and pieces of bark, particularly that of the oak. This singular circumstance would seem to show that the country was formerly inhabitable, till overwhelmed with sand from the decomposition of the rocks; but our author supposes that they present marks of a great inundation, because they are intermingled with a vast quantity of oyster shells, salt, and lakes of salt water. The history of the globe is inexplicable. Hornemann says, that the cultivated part of Fezzan may be three hundred B. miles N. to S., and two hundred W. to E., comprising, however, a mountainous region on the E. and some deserts on the S. and W., but he computes the population at only seventy thousand souls. According to the very doubtful reports mentioned by

our author, the Nigir communicates with the Nile during the rainy season. Tombuctu is still reputed the chief city, and most remarkable object in the interior of Africa. The people of Haoussa are said to be of beneficent dispositions, with features different from those of the negroes. Cougou, or the Koukou of Edrissi, is said to be called Fiddri by the natives. Here is said to be a large lake from four to eight days journey in circumference, according to the dry or rainy season, and which receives a river from the E. If credit may be lent to this report, the day's journey being estimated at twenty miles; this lake may perhaps be the real receptacle of the Nigir. To the N. of Bornou, a river is said to be lost under ground, a circumstance palpable in the map of Agathodemon, and not unusual in calcareous countries, though, in general, the stream reappears. But, upon the whole, the reports related by our traveller are vague and inconclusive.

One of the most remarkable novelties to be found in the journey of Hornemann, is that the habitable parts of the wide desert of Zaara are occupied by the Tibbos on the E. of Fezzan, and the Tuariks on the W.*

* Mr. Hornemann's journey from Cairo to Fezzan unhappily adds little to our knowledge of Africa. He has however confirmed the discovery of Mr. Browne, that the ruins of the temple of Jupiter Ammon are undoubtedly at Siwah. These little expeditions rather excite than gratify curiosity; and it is deeply to be regretted that, from the failure of any further correspondence, there is room to fear that this enterprising traveller has perished.

Mr. Browne has illustrated the geography of the greater Oasis. The word Oasis is now considered as derived from the Coptic word *Ouabe*, signifying a habitation or a habitable place. Among the Coptic manuscripts preserved in the National Library of France, no. 65 is a Coptic and Arabic dictionary.

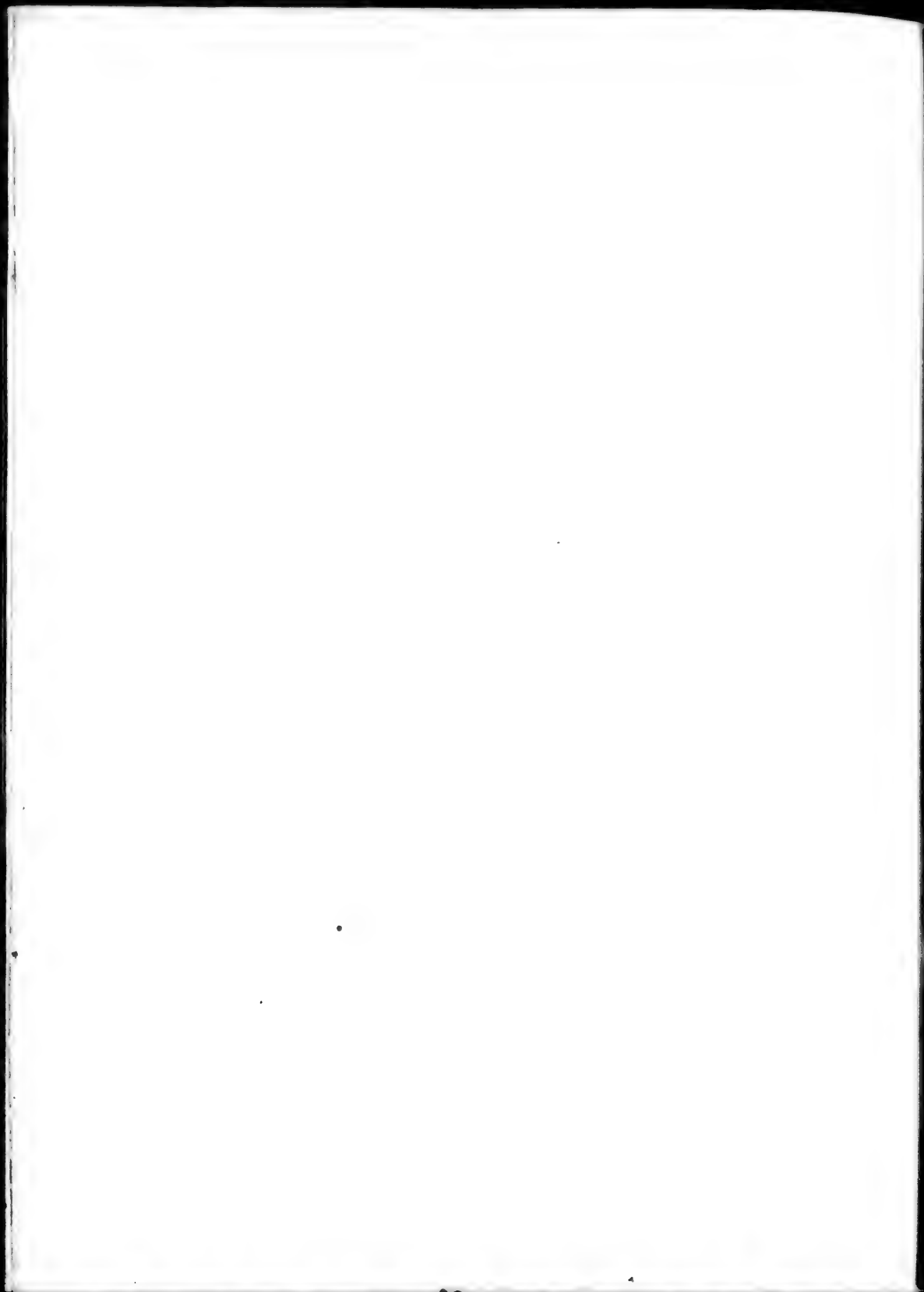
*DISCOVERIES, AND CONJECTURES, CONCERNING THE
CENTRAL PARTS OF AFRICA.*

HAVING completed this arduous circumnavigation of the globe, and arrived on the confines of Europe, whence the description first proceeded, one topic yet remains, which has considerably interested public curiosity. The interior parts of Africa present many geographical deficiencies, both in the northern and southern parts of that wide continent. The patronage of the African Society has already contributed greatly to the increase of our knowledge, not only by collecting recent oriental intelligence, but by exciting various travellers, particularly Mr. Park, to the accomplishment of this grand design; and though these laudable efforts have not been attended with all the effect that might have been wished, yet the precision of modern knowledge begins to dawn; and it is to be hoped that the travels of Mr. Hornemann will importantly tend to remove the remaining defects. The materials hitherto presented have been used with care by that celebrated geographer Major Rennell, whose succession of maps of the northern part of Africa, from 1790 to 1800, form of themselves curious specimens of the uncertainty of the subject, of the variations in the author's ideas, and of the progress of African geography. Suffice it to observe, that in his map of 1790 Rennell marks the Nigir as passing by Tombuctu to the west; while in D'Anville's map 1749, and in his ancient geography 1769, the Nigir is specially mentioned as running from the west to the east, and he dwells on the passage of Herodotus to that effect, which was afterwards illustrated by Rennell. But geography is often retrograde; and D'Anville's map 1749, the aspect of which is chiefly derived from Ptolemy, was certainly a better delineation of central Africa than Rennell's in 1790, or even 1800. Several theories have been recently started by various writers, but the French geographer was a decided enemy to theory, which in geography is worse than ignorance itself;

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itself; as it not only neglects the practical knowledge already acquired, but impedes the progress of discovery by a false semblance of science, not to mention the inconvenience, and sometimes fatal risk, that travellers may encounter in pursuit of this wild-fire. Such theories are often raised on mathematical evidence, built upon the sandy foundation of erroneous reports, hasty routes, and oriental inaccuracies. On such occasions mathematical calculations become as heterogeneous as in bishop Huet's Demonstration; and the best arguments are those from plain deduction, arising from striking features, and probable circumstances. Hence it follows that the best and most exact geographers (where the materials are astronomical and precise) will, if they attempt to build theories, wander the farthest from the truth.

The travels of Mr. Browne, merely to satisfy his own curiosity, and his fondness for oriental manners, have also contributed most essentially to our knowledge of northern Africa, not only by the geography of Darfur and Kordofan, but by ascertaining the origin and progress of the Bahr el Abiad, or real Nile; and by disclosing several circumstances towards the west, particularly a large river rising in the mountains of Kumri, and proceeding N. W. which seems to be the Gir of Ptolemy, and the Nile of the Negroes of Edrisi. It needs scarcely be added that as the source of the Nile, and the river running N. W. are striking features of Ptolemy's map, there is reason to infer that his intelligence deserves in other respects great credit.

It is unnecessary to remind the reader that all the recent information afforded by that of Ptolemy, will only throw a faint light on the northern half of this wide continent, as far as the central ridge of Kong, continued in a N. W. and S. E. direction across to the mountains of Kumri, and those on the south of Abyssinia, perhaps extending to Ajan on the eastern shore. The interior of the southern half of this great continent will remain a theme equally interesting, and still more unknown. In proceeding first to give some idea of the discoveries and conjectures concerning the northern half, it will be proper to begin with ascertaining where the light of discovery terminates.

From the travels of Mr. Park, and the map constructed by Rennell, it appears that three great rivers, the Gambia, Senegal, and Joliba

Park's route.
Sego.

or Nigir, rise from a chain of lofty mountains, N. lat. 11° ; and as Browne lays down the mountains of Kumri, which give source to the Nile and Bahr Kulla, in N. lat. 7° , it seems sufficiently evident that this grand chain proceeds across the continent, especially as it was observed by Mr. Park as far as he penetrated. This enterprising and ingenious traveller* pursued the course of the Joliba from long. $5^{\circ} 30'$ W. of Greenwich to Silla, long. $1^{\circ} 30'$ the utmost extent of his expedition. Not to mention curious and interesting information concerning the manners and present state of the countries through which he passed, we are indebted to Mr. Park for the Moorish kingdom of Ludamar, where he was detained at Benowm, and for another called Beeroo, the capital of which is Walet, while to the E. is the celebrated kingdom of Tombuctu. To the S. of these are the negro kingdoms of Kaarta and Bambarra, the capital of the last being Sego; beyond which, about 70 g. miles to the N. E. is Silla. The chief geographical objects in Mr. Park's route are the river Joliba, and the town of Sego. The word *Joliba* signifies the Great Water; and when this river was first descried by our traveller, it was flowing slowly to the eastward, and glittering to the morning sun, with an expanse as broad as the Thames at Westminster. He soon after arrived at Sego, the capital of Bambarra, which consists of four divisions, surrounded with high mud walls; two on the north side of the river, and two on the southern. The houses are in a square form, with flat roofs: they are of clay, some have two stories, many are white washed. Several mosques also appear; yet the streets are narrow, wheel carriages being unknown. The inhabitants are computed at 30,000, but such calculations are usually exaggerated. The king resides on the southern shore; and people are ferried in canoes, consisting of two large hollowed trees joined at the ends. Around is a slender cultivation: and these mud walls and canoes are called African magnificence.

In Ludamar Mr. Park learned, from a sheref who arrived with salt

* The narrative of his journey was written by the late Bryan Edwards. See Sir William Young's Advertisement to the third volume of that ingenious author's History of the West Indies, 1801, 410.

! P. 291, 8vo.

and

and some other articles from Walet, the capital of Beeroo, that Houssa was the largest town he had seen, Walet being larger than Tombuctu.² At Silla Mr. Park collected intelligence from the Moorish and Negro traders, who informed him that two days journey to the E. is the town of Jenne, situated on an islet in the river; beyond which, at the distance of two days, is the Dibbi or Dark-lake, in crossing which from W. to E. the canoes are said to lose sight of land for an entire day.³ From this lake the river issues in several streams, terminating in two large branches, which join at Kabra, one day's journey S. of Tombuctu, and the port of that city or town. At the distance of eleven days from Kabra, the river passes to the southward of Houssa, which is two days journey distant from the Joliba. "Of the further progress of this great river and its final exit, all the natives with whom I conversed seem to be entirely ignorant." To the eastward of Houssa is the kingdom of Kassina. The present king of Tombuctu is named Abu Abrahima, and is said to be rich, his wives and concubines clothed in silk. The kingdom of Houssa is of superior consequence. To the S. of the Nigir were mentioned the kingdoms, or rather districts of Gotto; to the W. of which are Baëdoo and Maniana, the inhabitants of the last being reported cannibals. So far Mr. Park's intelligence in the west, which terminates with Houssa about E. long. from Greenwich 4°.

PARK'S
ROUTE.

On the eastern side Mr. Browne's intelligence extends to long. 17°; so that there is a deficiency of thirteen degrees or 780 g. miles; but this space unfortunately comprises the most interesting portion of northern Africa, and especially the termination of the Nigir: and to the N. W. of Darfur the deficiency becomes more extensive. To the S. of Cobbé, at the distance of twenty-three days, are noted copper mines; beyond which, at the distance of seven days and a half, is the Bahr el Abiad. Mr. Browne's map is unfortunately laid down with little care, and the river is placed too near the mines. To the W. is the river of Kulla, the banks of which, according to Mr. Browne's information, abound with pimento trees, and the ferry-boats are partly managed by poles, partly by a double oar.⁴ The trees are so vigorous, from the quan-

Browne's
journey.

² P. 210.

³ P. 317.

⁴ P. 319.

⁵ Browne, p. 308.

tity

and

BROWNE'S
JOURNEY.

tity of water and deep clay, that canoes are hollowed so large as to contain ten persons. The natives of Kulla are partly negroes, and partly of a red or copper colour; and the country is chiefly frequented by Jelabs or traders from Bergoo and Fur, in order to procure slaves, the most trivial offence being here punished by selling the person to foreign merchants. On the W. of Bornou Mr. Browne heard of Afnou, which is a negro word for Soudan or Nigritia in general, but is particularized as a country abundant in silver: and there is a remote part of the pagan country, called Gnum-gnum, where the people eat their captives taken in war; but this can scarcely be the Maniana of Park, and it is probable that the mountaineers in the S. retain, as usual, the most ancient and ferocious manners. Mr. Browne did not hear of Wangara; but Zamphara, not far from Bornou, was mentioned by his informers, commonly Jelabs or travelling merchants.

Thus far the rays of modern intelligence throw a faint light upon northern Africa; and beyond all is theory and conjecture. But amidst this uncertainty there are two sources of information which deserve preference, till more precise knowledge can be obtained. These are Ptolemy, who wrote in Egypt, before the negroes were envenomed with Mahometan fanaticism, and after the Roman arms had penetrated to the Nigir: and the Arabian authors, who, by the progress of Mahometanism, had the best intelligence concerning this continent. Yet upon the whole Ptolemy's information and exactness will obtain a decided preference over the fabulous turn and gross inaccuracies of the Arabian geographers; and it has already been remarked that the recent discoveries, both in the east and west, tend to confirm Ptolemy's description; or rather the general aspect of the map constructed upon it by Agathodemon.

Ptolemy.

The most remarkable error, or inaccuracy, in Ptolemy's map is that he certainly conceives the Nigir to rise in the mountain of Thala; or, what amounts to the same, he supposes that the river terminates in a lake in the W. which he calls Nigritis Palus; whence it was clearly the opinion of this great geographer that the Nigir ran from E. to W. in

which he seems to have been misled by confounding it with the Gir.* PTOLEMY.
 The last river he clearly deduces from mountains in the S. E. so as to correspond with the Bahr Kulla, though he be a stranger to its remote source. This river is another grand feature of Ptolemy's description, which has escaped modern geographers, though D'Anville, 1749, had inserted it with his usual knowledge and industry. This river is represented by Ptolemy as receiving two tributary streams from two lakes; and among other cities on its bank is a metropolis called Gira; as upon the Nigir there is another styled Nigira. The termination of the Gir is not a little obscure, but it seems to be delineated as passing under a chain of hills, on the N. of the Lybia Palus, or central lake of Africa, and afterwards joining the Nigir in its course to the W.† Other circumstances of Ptolemy's map will remain obscure till further discoveries. His Panagra, between the Gir and the Nigir, may be the Wangara of the Arabs; and his mountains of Caphas, Thala, and Aranga, seem to belong to the central ridge. To the S. he inserts the names of numerous petty tribes, probably dispersed in the central mountains, for such little divisions are common in the mountains of Barbary, as appears from Shaw, and other travellers. To the S. of these is the wide region of Agisymba, with the mountains of Xiphé and Barditas, and that of Mefchi giving source to a river which runs S. out of the bounds of Ptolemy's geography, but probably one of those that flow from the mountains of Kong into the gulf of Guinea.

It has already been observed that this geographer has omitted the Zaara or Great Desert, and that the interior part of his map is laid down

* In his description of the Nigir he considers it as joining Mount Mandrus, (at the bottom of which is the Nigritis) with Mount Thala in the centre of Africa, and says nothing of its origin. By a striking singularity he describes all the rivers that join it as being deflections, or digressive streams, (εκτροπή) from the Nigir.

† Claudian, a native of Egypt, thus mentions the Gir.
 Hesperidum Triton: et Gir notissimus amnis
 Æthiopum, simili mentitus gurgite Nilum.

De laud. Stil. i. 251.

In the table of Peutinger the Gir is called *Girin fl.* and there is a note that some suppose it to be the Nile: *dicitur enim sub terra Etyopum in Nylum ire lacum.* It runs E. to W. and rises in a mountain on the east. The Niger is not delineated.

PTOLEMY. from land routes, while the western coast is from maritime expeditions. On the S. his latitudes are equally erroneous, as he places the sources of the Nile, and the mountains of the moon, in S. lat. 13° , instead of N. lat. 6° , or 7° ; an error of about twenty degrees or 1200 g. miles! It seems evident that even his most southern mountains belong to the central ridge of Kumri; but that he had heard of Agisymba, which according to D'Anville, in the Abyssinian language only signifies Southern Country: while, from the natives on the South of the Nigir, the Romans may have learned that some rivers ran from the mountains of Kong towards a southern sea.

The Arabs. Having thus briefly examined the leading points of Ptolemy's African geography, that of the Arabs will not be found deserving of equal attention. The most celebrated is Edrisi, who wrote in Sicily in the twelfth century, but from his minute attention to eastern Africa, he was formerly styled the Nubian geographer. By some strange inadvertance the towns mentioned by this author, who wrote six centuries and a half ago, have been inserted in modern maps, while perhaps there is not one of them in existence. Setting this aside it will appear, from an accurate examination of Edrisi, that while his Nile of the Negroes, which he says runs to the W. has been mistaken for the Nigir, he really knew nothing of that river; and his Nile of the Negroes is the Gir of Ptolemy, terminating in an inland lake, in which was the island of Ulil, one day's sail from the mouth of the river; and in which island another Arabian geographer places the capital city of all Soudan. Beyond this lake and island Edrisi appears to have had no knowledge of central Africa; all the regions and towns he mentions seem to belong to the Gir, his Nile of the Negroes, running to the N. W. and from his account it would appear that Wangara is the delta of the Gir. It is however to be hoped that Mr. Hornemann will soon adjust these uncertainties. Some have conceived that the river of Kulla, after proceeding some time to the N. W. flows S. W. and joining the sea at Calabar: but this is improbable, for Mr. Browne repeatedly expressed his idea to the author that this river continued its course in its original direction; and it is not likely that it should pass the grand mountainous ridge, in its centre and highest part, nor that so great a stream, which would afford such a grand inland navigation,

gation, should have escaped travellers in Benin and Calabar; nor according to the best maps is there any estuary in these countries that can at all correspond to such a river. The most curious and important discoveries which remain are probably the river Gir, and the lakes, marshes, or deserts, which receive that river and the Nigir; the latter being an object of great singularity, equally unknown in the time of Ptolemy and at the present day. Perhaps in a level plain these large rivers send off various branches, gradually lost in the sands; but Ptolemy and the Arabs indicate a great central lake, which could scarcely so long have escaped more precise notice, except we conceive that the northern part is surrounded with deserts, and the southern with lofty and inaccessible mountains, covered with forests and full of ferocious animals, so that the traders only passing the northern part, and isle of Ulil, are complete strangers to its southern extremity. But whether these conjectures shall be classed with the travels of Gaudenzio di Lucca,* or be found considerably to approach the truth, must be left to future discovery.

As in Asia the chief obstacles to discovery have not been the sandy deserts of Cobi or Shamo, but the inaccessible mountains of Tibet, so in Africa it would appear that the impediments must arise from high mountains, and not from sandy deserts, such as are familiarly passed by caravans in every direction: it is also probable that these mountains are covered with thick forests, and the thorny underwood frequent in Africa, sometimes inhabited by aboriginal tribes of the greatest cruelty and ferocity, and at others swarming with lions, and panthers. It would have been most beneficial to the natives if, as in Asia and Europe, victorious armies had established wide empires; and, at the expense of temporary destruction, had secured lasting intercourse and general advantages.

The continual wars between petty tribes seem also to conspire with a ridge of impassable mountains, called Lupata, or the Spine of the World, to prevent discoveries in the interior of southern Africa, where

* This singular work was published by Bishop Berkley, and pretends to disclose an interior country in Africa. The Bishop and his friends seemed to regard it as genuine, but the public has never concurred in that opinion.

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the map of D'Anville, half a century ago, presents every thing that is known with any degree of certainty at the present day.* By a singular fatality Africa, the least known of all the continents, has become the portion of the Portuguese, the most ignorant of all the European nations. In the hands even of the Russians considerable light would have been diffused, while the Portuguese darkness renders all surrounding objects as vague and obscure, as if they belonged to the twelfth century. Besides the chain of mountains pervading this part of Africa from N. to S. or perhaps two chains at a considerable distance, supporting an upland terrace in the centre, whence there are no rivers of prodigious size as in South America, the chief feature yet known seems to be a lake of great extent, called Maravi, laid down by D'Anville as more than 350 B. miles in length, but of inadequate breadth. This lake may perhaps like that of Baikal, lie at the foot of the table-land on one side, as that of Aquilunda of far smaller extent does on the other. The rivers of Barbela in Congo, and Zambezi in Mocaranga, are also grand features; which seem to be delineated by D'Anville in his general map of Africa, and his particular maps of Congo, Angola, and Mocaranga, 1731, with as much care and precision as his Portuguese materials would admit. The navigation of the Zambezi is interrupted for about twenty leagues, by cataracts or violent rapids, about the distance of 140 leagues from the sea. To the N. are, or were, the Mumbos, a race of cannibals, who with the Zimbhas and Jagas, savages of equal cruelty, have desolated a great part of southern Africa.† Should the Portuguese retain their possessions, it is likely that the darkness may be the same in the year 2002, as it is in 1802, when it is little better than it was in 1602, some accounts having been then published by Lopez and Philip Pigafetta. It is to be regretted that in our strict alliance with Portugal we do not instigate that government to use some means to improve the geography

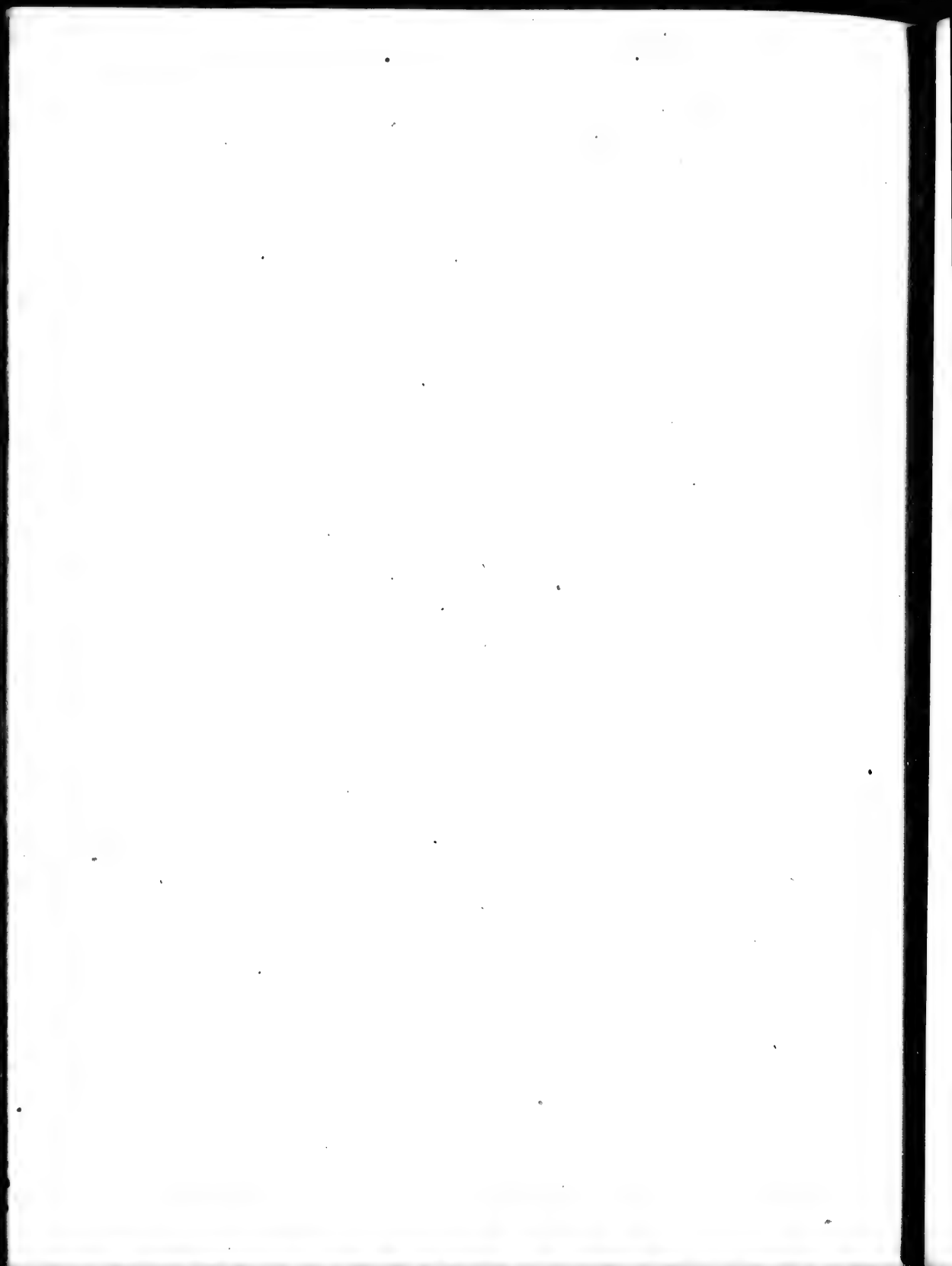
* On the E. of Congo are the mountains of Crystal, and those of the Sun, the latter being naked alpine precipices. See Pigafetta's Congo, &c.

† From Cavazzi's Account of Congo, Bologna, 1687, fol. it would seem that the Jagas are the Tatars of central Africa, chiefly consisting of wandering tribes who range from the South of Abyssinia to the confines of Congo W. and of Mocaranga E. It would also appear that between the ranges of mountains there are vast sandy deserts.

of southern Africa ; and La Cruz's map of South America should operate as a stimulus and example. It is probable that the country is as fertile in the precious metals as the other continent, and it is wholly unaccountable, and a truly singular destiny, that America should be filled with European colonies, while Africa is neglected. If the natives of the western continent were not spared, humanity would have little cause to regret the extirpation of the Mumbos and Jagas, and the consequent deliverance of the more gentle and civilized tribes from the unceasing destruction inflicted by these cannibals. Small colonies on the shores will effect nothing in such a country, and the wrongs of Africa can only be terminated by a powerful European colony, an enterprise worthy of any great European nation, a scene of new and vast ambition, and among the few warfares which would essentially contribute to the eventual interests of humanity, and raise a degraded continent to its due rank in the civilized world.

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Meanwhile it is more consonant with the tenor and purpose of the present work to express a humbler wish, that spirited travellers would explore these regions, as the fame of science is superior to that of arms : and if we cannot diffuse civilization, and the blessings of stable and subordinate society, we may at least, by comparison, learn duly to prize their advantages.



ZOOLOGICAL REMARKS,

By Dr. SHAW.

AMERICA.

AMONG the American Quadrupeds worthy of particular enumeration AMERICA. are the Sloths, of which two species are known; both natives of the hotter parts of South-America. Of these the *Bradypus tridactylus*, or three-toed Sloth, is distinguished by having all the feet terminated by three very strong and slightly curved claws; while the two-toed Sloth, or *Bradypus didactylus* has only two toes on the fore feet, and three on the hind. The size of these extraordinary quadrupeds is that of a smallish dog, their colour brown, and their hair coarse and long: the three-toed species is further distinguished by a black stripe running from the neck to a considerable distance down the back, accompanied by several black spots between the shoulders. It is unnecessary to add, that these animals have obtained their name from the slowness of their motions, in which respect, however, the three-toed species is by far the most remarkable. They live entirely on vegetables, and are found on trees.

In South America also occur the Ant-Eaters, or *Myrmecophagæ*. Of these the principal species is a large animal, measuring seven feet from the nose to the end of the tail. It is of a lengthened shape, with a small head, and very lengthened snout, short legs, and very long bushy tail, nearly equalling the rest of the animal in extent: it has no teeth, the mouth forming the termination of a tubular snout, and being furnished with

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an extremely long worm-shaped tongue, which the animal extends at pleasure among ants or other insects, and, by suddenly withdrawing it, swallows its prey: the fore feet of this species have four very strong claws, and the hind feet five: its colour is a dark iron grey, with a broad black band, edged with white, running from each shoulder towards the flanks, and gradually lessening in its progress.

The middle Ant-Eater is an inhabitant of the same regions, and is of a yellowish grey colour, with a dusky stripe along each side of the neck: the tail is long and taper, and nearly bare towards the tip. The size of this species is far inferior to that of the former.

The striped Ant-Eater, described by Buffon, is supposed to have no existence; the specimen from which this description was drawn up, having been discovered to be a deceptive preparation, in which the dusky stripes of that imaginary species were composed of dark hairs glued on to the skin.

The least Ant-Eater is a very elegant animal, not exceeding a squirrel in size, with a short snout rather bending down, and a long tail, naked beneath towards the tip: the whole animal is covered with very fine, soft, silky hair, resembling wool, and of a yellowish brown colour: the fore feet have each two claws only, of which the exterior is very large and strong: on each of the hind feet are four smallish claws. This species inhabits Guiana, and is generally found on trees.

The *Armadillos* are remarkable for the curiously formed suit of natural armour with which they are clothed: they feed on roots, worms, and insects, and inhabit the warmer parts of South America, burrowing under ground, and chiefly wandering about by night. The Armadillos are distinguished into species according to the number of divisions or zones on the armour of the body: in this respect, however, they are sometimes known to vary. The largest is the twelve-banded Armadillo, sometimes measuring four feet in total length: its colour is a dusky brown. The nine-banded Armadillo, or *Dasyus novem-cinctus* of Linnæus seems to be one of the most common: it measures about a foot from nose to tail, which is of equal length: its colour is yellowish brown, the crust or armour on the body being divided into nine, and sometimes into ten zones, while on the head and hind parts it is marked into numerous hexagonal spaces.

The

The Glama (*Camelus Glama*, Lin.) is a native of Peru, and has been described by some of the old naturalists under the name of *Ovis Peruviana*, or Peruvian Sheep. In a wild state it inhabits the highest and coldest part of the mountains, feeding in numerous herds, and flying, with great rapidity, on the sight of mankind. It was completely subdued and domesticated by the ancient Peruvians, being the only beast of burthen among that people, to whom it answered the same purposes as the Camel and Dromedary in the eastern regions of the old continent. The general size of the Glama is nearly that of a Stag; the neck is of a great length, and the head small; the whole animal bearing some resemblance to a Camel on a smaller scale: its general colour is a light ferruginous brown, paler or whitish on the under parts: it is, however, said to be sometimes varied or patched with darker and lighter shades on different parts, and to have a black stripe running down the back to the beginning of the tail, which is short and full of hair. In the domesticated or cultivated Glama, the hair is smoother and closer than in the wild animal. The Glama has many of the habits of the Camel, striking with its feet when angry, and, at the same time, ejaculating from its mouth a quantity of saliva, which is said to be of a slightly acrimonious nature. When resting, it leans on its breast, like a camel, which it also resembles in the faculty of abstaining long from drink; sometimes even four or five days: its flesh is said to resemble mutton in flavour.

The Vicuna (*Camelus Vicugna*, Lin. Gmel.) bears a great resemblance to the Glama, but is of a higher and more delicate aspect, and of smaller size; the head smaller and shorter in proportion, and the eyes remarkably large and full. The prevailing colour of the Vicuna, on the upper parts, is a reddish brown, or approaching to a wine-colour; and the remainder of an isabella colour, but the belly and insides of the limbs white: the hair is very soft, wavy, and woolly; that on the breast is nearly three inches long; on the other parts not more than one inch. This species affords an exquisite wool for manufacture, and is wrought into cloths of silky softness, and very beautiful, but said to be too warm for common wear, unless made peculiarly thin.

The *Paco*, formerly confounded with the two preceding species, is found in the same regions, associating in large herds: it is said to be of a more robust make than the Vicuña, and is covered with long wool, which, in the wild animals, is of a dull purple colour, resembling

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that of dried rose-leaves, but in the domesticated kind is often varied with black, white, and rufous: the belly is white. It is kept in vast numbers by the Peruvians, and affords a wool from which exquisite cloth is prepared.

The *Guanaco* is found in similar situations with the preceding animals, and is the largest of all, sometimes growing nearly to the size of a horse. It appears to be more nearly allied to the *Glama* than the rest, but is said never to associate with that animal. Its colour is tawny, white beneath; the back is pretty much arched, and the neck long. This species is covered not with wool, like the rest, but with long fine hair.

The *Allo-Camelus* of Gesner, figured by Mr. Schreber in his *Quadrupeds* under the title of *Camelus Huanacus*, is perhaps a distinct species. Of this animal a specimen was sent into Europe in 1558, and called an Indian Sheep. It came from Peru, and was, according to Gesner, six feet high, and five long; the neck as white as that of a swan; the rest of the body reddish or purplish; the feet like those of a camel.

The *Chilihuque* (*Camelus Araucanus*, Lin. Gmel.) is described as measuring about six feet in length, and four in height: it is covered with woolly hair, and, in its general appearance, is not unlike a ram: the ears are flaccid or pendulous, the neck and legs long, and the tail like that of a sheep, but shorter in proportion: the wool is very soft, and the colour is said to vary in different individuals, being either brown, black, ash-coloured, or white. It inhabits Peru and Chili, and was employed as a beast of burthen by the ancient inhabitants of Chili, and sometimes in ploughing: its wool was also used for cloth, but has given way to the introduction of European wool, as being stronger and more serviceable.

The *Moose*, or North American Elk is supposed to be no other than a variety of the common or European Elk, but it seems to have been sometimes confounded with a very different species, commonly called Elk by the North Americans: it has been well described by Dr. Barton of Philadelphia, under the name of *Cervus Wapiti*. It is termed Wapiti by the Shawnee Indians, and sometimes Moose, which, unfortunately, often causes confusion. It is a beautiful and stately animal, and, in habit, somewhat allied to the common Stag, but much larger: its colour in Winter is a dark bluish grey, which in Summer changes to ferruginous: the horns are very large, being often five feet in height, and are rounded, and branched: the female is destitute of horns. It is sometimes seen in

Virginia and Carolina, but its general residence is in the more northern parts of the United States.

The *Tapir*, one of the largest of the native animals of South America, is found chiefly in the Eastern parts of that continent, inhabiting woods and rivers, and being of a gregarious nature. Its size is nearly that of a heifer: in its general form, it bears some distant resemblance to the Hippopotamus, under which genus it was once arranged by Linnæus. Its colour is an obscure brown, the skin itself being of that cast, and but sparingly covered with shortish hair: the male is distinguished by a kind of short proboscis or trunk, formed by the elongation of the upper lip, which is extensile and wrinkled: the neck is very short, and furnished with a rising mane; the back much arched, and the body thick and heavy; the legs short; the fore feet divided into four pointed hoofs, and the hind into three; the tail short, thickish, and pointed. It is an animal of harmless manners, and when pursued, endeavours to save itself by plunging, if possible, into some river, swimming with great readiness, and continuing long under water, in the manner of the Hippopotamus: its teeth are very numerous.

The *Equus bifidus*, or Cloven-footed Horse, is a species described by Molina, and is said to inhabit the mountains of Chili: in its general appearance, size, and colours, it resembles the ass, but has the voice of a horse, and is very wild, strong, and swift: the hoofs are divided as in ruminant animals.

The *Pecary* or *Tajacu* is the only animal of the Hog kind that is a native of the new world. It is considerably smaller than a common hog, and of a thick, compact form: the whole animal is thickly covered on the upper parts with very strong, dark brown or blackish bristles, each marked by several yellowish white rings, so that the colour of the whole appears speckled, and round the head is generally a whitish collar: the head is rather large; the snout long; the ears short and upright; the belly nearly naked. This animal has no tail, and, at the lower part of the back, at some little distance beyond the rump, is a glandular orifice surrounded by strong bristles in a somewhat radiated manner. From this orifice exudes a strong scented fluid, and this part has been vulgarly supposed to be the navel of the animal. The Pecary is of a gregarious nature, and is very fierce, and even dangerous. It feeds both on vegetable

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and animal substances, and is said to be a great enemy to snakes and other reptiles.

The *Mus Burfarius*, or Canada Rat is a species but lately observed, and is a native of Canada. It is of the size of the brown or Norway Rat, and of a pale greyish colour; the tail is little more than two inches in length, and but slightly covered with hair: this species is furnished on each side the mouth with a pair of very large pouches or receptacles for food, and it is probable that it collects a large stock of provisions for its winter support.

Of the Fossil Quadrupeds of America, or such as are no longer known in their recent state, the most remarkable are the *Mammoth* and the *Megatherium*; the former found in North, and the latter in South America. The Mammoth is considered by Mr. Pennant as a species of Elephant, and its principal mark of distinction from other species consists in the shape of the grinders, which are furnished with slightly sharpened rising lobes, resembling in some degree those of carnivorous animals, to which, however, it does not appear that the Mammoth was allied; since we are informed by Dr. Barton, that the stomach of this animal, filled with vegetable contents alone, was lately discovered, in good preservation, amid the bones of the skeleton.

The *Megatherium*, of which a complete skeleton was some years ago discovered, at the depth of an hundred feet, in a sandy soil, in the vicinity of the river La Plata. It measured about twelve feet in length, and six in height: this animal is by the celebrated M. Cuvier considered as having been more nearly allied to the genus *Bradypus* or Sloth, than to any other: it is of a lengthened form, with very thick legs, and the feet furnished with strong claws: the back of the head is lengthened and flattened, but is pretty convex above the eyes: the two jaws form a considerable projection, but are without teeth in that part, there being only four on each side above and below, all grinders, with a flat crown, and grooved across: the breadth of the branches of the lower jaw, and the great apophysis placed on the base of the zygomatic arch deserve particular notice. This quadruped, says M. Cuvier, in its characters, taken together, differs from all known animals; and each of its bones apart, also differs from the corresponding bones of all known animals.

Of the American *Amphibia*, the *Siren lacertina*, or Eel-shaped Siren, is the most remarkable. This animal, which seems to have been first observed,

served, or, at least, first described by the late Dr. Garden, is a native of ^{AMERICA.} North America, and is chiefly seen in South Carolina, occurring in muddy and swampy places; living generally under water, but sometimes appearing on land. It has a kind of squeaking or singing voice, for which reason Linnæus distinguished it by the title of *Siren*. Its size nearly equals that of an Eel, and its general colour is blackish brown, with numerous, minute, whitish specks: it has only two legs, which are very short, and placed at a small distance beyond the head: the feet are each furnished with four weak toes, and on each side the neck are situated three pair of ramified organs resembling those of water newts in their imperfect state: the eyes are very small; the mouth small, with numerous, strong teeth. This animal was considered by Linnæus as of so extraordinary a nature as to justify the institution of a particular order for it, under the name of *Meantes*. By some it has been considered as the larva of some large American Lizard; but at present it seems to be acknowledged as an animal in its perfect state, and with the Austrian *Siren*, and some others which have been since detected, may be allowed to constitute a regular genus among the Amphibia.

The *Lacerta orbicularis* or round-bodied Lizard, sometimes erroneously supposed to be a native of Sicily, appears to be an inhabitant of the temperate and warmer parts of America.

Of Snakes both North and South America, afford various kinds, but the most remarkable are those of the genus *Crotalus*, or Rattle-Snake. The species of Rattle-Snakes appear, from late observations, to be more numerous than were formerly supposed.

In South America many species of the Genus *Boa* occur; some of which are of extraordinary elegance.

Of the American Frogs two of the most remarkable are the Bull-Frog, and the Argus Frog, both natives of North America, and seeming to have been often confounded together, under the general name of Bull-Frog.

The Bull Frog of Catesby is often found to measure eighteen inches from the nose to the ends of the hind feet: its colour is dusky olive, with numerous black spots, the under parts inclining to yellowish white: the hind feet are very widely webbed. It is common in the United States.

The Argus-Frog is of similar size, and its colour is said to be a pale reddish brown, with two whitish lines running down the back at a considerable distance from each other, the intervening space being marked by several chestnut-coloured, transverse, broad bands: the sides of the body are marked

by

AMERICA.

by several round chefnut-coloured spots, each being half furrounded by a pale crescent: the limbs are elegantly barred with brown: all the feet are perfectly unwebbed, and the joints of the toes are marked by protuberances beneath. It is not, perhaps, perfectly clear whether this species should be considered as a North or South American animal.

A much more extraordinary species of this genus is the Horned-Frog, a native of South America, though erroneously attributed by Linnæus to Virginia. It is of considerable size, and is principally distinguished by a rising, pointed prominence over each eyelid, resembling a pair of short horns.

Of American Fishes, the *Gymnotus* is perhaps the most singular: its general shape bears a resemblance to that of an eel, and its colour is a dark brown: its electric, or rather galvanic powers have been so often described that to repeat them here would be superfluous: it is said to grow to the length of several feet, and is principally found in the river Surinam, in the country of that name.

Of the American Birds, the Condor is the chief, being generally considered as the largest of all birds possessed of the power of flight. Its colour is black, with a mixture of white on the wing-feathers; on the head is a callous, rising crest, and on each side the neck several small wattles of a semicircular form and a bluish colour: the throat to some distance down the breast is bare and red. In the Leverian Museum, now unhappily dispersed, were two of these magnificent birds.

The particular kind of Parrots called Maccaws, are the peculiar natives of South America; of these the chief are the Great Scarlet Maccaw; the Blue and Yellow Maccaw, and Hyacinthine Maccaw, entirely of a fine deep blue, with the orbits of the eyes and cere of the bill yellow.

The diminutive race of Humming-birds is peculiar, with one or two exceptions, to South America: the species are extremely numerous, and may be said to amount to between sixty and seventy. Of these the common or Red-throated Humming-bird is seen as far North as Canada; and the Ruff-necked Humming-bird has been observed at Nootka Sound. The least of all the tribe, the *Trochilus minimus*, measures only an inch and quarter from the tip of the bill to the end of the tail, and is of a gilded greenish brown colour above, and white beneath; the wings violet-brown, and the tail black.

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The Three-toed Ostrich, an inhabitant of South America, seems yet AMERICA-
but obscurely understood by European Naturalists, no full grown specimen
having been imported into Europe: it is said to be less than the Common
or African Ostrich, and its general colour brown, with white feathers on
some parts, but its chief distinction consists in the feet, being furnished with
three toes, which are all placed forwards.

AFRICA.

In the interior parts of Africa occurs the *Rhinoceros bicornis*, or Two-
horned Rhinoceros, till of late years, but very imperfectly known to mo-
dern naturalists. It was known however to the ancient Romans, and was
by them exhibited in their public shows, &c. Its representation occurs on
a medal of Domitian.

Another animal, which the ancient Romans were also acquainted with,
is the *Giraffe* or *Camelopard*, one of the most remarkable of Quadrupeds,
measuring not less than seventeen feet in height from the top of the horns
to the fore-feet: its general form is highly elegant, with very unusual
proportions: the neck is of vast length, the fore parts appearing remarka-
bly high, and the hind parts low: its colour is whitish, variegated on all
parts with numerous, moderately large, and somewhat square rusty-brown
spots. It is of a harmless nature, and lives entirely on herbage and the
foliage of trees.

The *Hippopotamus*, which yields only to the Elephant and Rhinoceros
in size, is an inhabitant of the larger rivers, out of which it emerges chiefly
by night, in order to feed, concealing itself during the day, and merely
raising its nostrils above the flood at intervals to breathe.

The *Myrmecophaga Capensis*, or Cape-Ant-Eater, is a large animal,
measuring about three feet and a half from the tip of the nose to the begin-
ning of the tail, which measures one foot nine inches: the general colour
of the animal is grey, tinged with reddish on the sides and belly: the head
is of a conic shape, the nose long, and somewhat abruptly terminated, like
that of a hog: the tongue, as in the American Ant-Eaters, is very long
and slender: the fore feet have four, and the hind five claws, all very
strong. This species inhabits the Cape of Good Hope, where it lives
under ground, and is called by the name of the Ground-hog.

Among

AFRICA.

Among the Birds of Africa, the Leona Goatfucker is one of the most singular. It is an inhabitant of Sierra Leona, and is about the size of the common European Goatfucker, which it considerably resembles in its plumage, but is distinguished by the remarkable circumstance of having a single feather, twenty inches in length, springing from the middle of each shoulder, among the smaller covert-feathers: these two long feathers are naked for about the length of fourteen inches, when they suddenly dilate into a broad web or oval extremity of a dark colour, with several lighter bars.

The *Mufopbaga* or Plantain-Eater, is a beautiful and rare bird, measuring about nineteen inches from the tip of the bill to the end of the tail, which is long, and of a cuneated shape: the general proportions of this bird are elegant, and its colour is a fine violet-colour, with a large patch of deep crimson on each wing, the middle of the quill feathers being of that colour: the bill is rather short, convex, of a reddish yellow colour, and somewhat detached from the front of the head at the base: the upper part of the head is purple, and a white stripe of somewhat lengthened feathers passes beneath each eye. This beautiful bird is found near the borders of rivers, in the province of Acra in Guinea, and is said to live chiefly on the fruit of the genus *Musa* or Plantain-tree.

The Touraco-bird, which is considered by Linnæus as a species of Cuckow, is in some degree allied to the preceding bird, and is about the size of a Magpie, and of a very deep green colour, with the lower part of the back and wings violet-colour: the larger quill-feathers are of a fine deep crimson, with black tips, and the tail blueish purple: the orbits of the eyes are red; above and below each eye is a white stripe; the head is decorated with a broad or full upright green crest of silky fibres: the bill is short, and the legs are short, with two toes in front and two behind. The feathers of the head, neck, and back are of a very soft, fibrous aspect, resembling silk. It is found in various parts of Africa.

The Leona Bee-Eater is a species of peculiar brilliancy. Its size is something larger than that of a King-fisher, and its colour black, with the forehead and rump bright-blue, the sides of the body spotted with blue, and the throat very bright blood-red: the tail is even at the tip, and the two middle feathers are slightly edged with blue. It is found in Sierra Leona.

In the African islands of Mauritius and Bourbon, was formerly found that extraordinary bird called the Dodo; now no longer an inhabitant of those

those spots. The existence of this bird, which has sometimes been called *Africa*, in question, is fully ascertained by its remains in the Ashmolean and British Museums; the bill being preserved in the former, and the leg in the latter. In the British Museum is also an original picture, painted in Holland from a specimen brought over by the Dutch, sometime after the discovery of the Cape of Good Hope. A complete skin of the bird appears also to have once belonged to the Tradescantian Collection, in which it was seen by our celebrated naturalist Ray. The Dodo is said to be of a size between that of a Swan and a Cassowary; its general colour black or dusky, with white variegations; its shape extremely heavy or clumsy; the head large, and the bill of great size, and deeply striated or contracted near the middle: the wings useless for flight, the tail furnished with curling feathers, like those of an Ostrich's tail: the legs extremely thick and short. The natural order or tribe to which the Dodo belongs seems to be that of the *Gallinae*.

In some parts of Africa occur some of those vast serpents belonging to the genus *Boa*, of which so many surprising accounts are given. Of these the largest is the *Boa Constrictor* of Linnæus, skins of which measuring thirty feet in length are sometimes to be seen in the European Museums. To this species must be referred the enormous serpent said to have been met with by Regulus, near the river Bagrada, and which struck terror into the whole army: according to Pliny and others, its length was an hundred and twenty feet!

The *Ceraastes* or Horned Viper, is still very common in many parts of Africa, inhabiting sandy regions. Its general length is about fifteen inches or two feet, and its colour dull ferruginous, with darker markings; immediately over each eye rises a curved, horn-shaped process.

A much more remarkable species is the *Coluber nasicornis*, or Horn-nosed Snake; of a much larger size than the preceding, measuring about thirty-five inches in length: its colour is olive-brown, with numerous blackish freckles, the back marked by a row of oblong pale spots, edged with black, and the sides marked by an undulated pale band, with dark edges: this species is furnished with large fangs, and appears to be of a very poisonous nature.

Of the African Fishes, one of the most remarkable is the *Polypterus Niloticus*, or *Nilotic Polypterus*, constituting a new genus, and distinguished by the very unusual circumstance of numerous fins on the back, running

ZOOLOGICAL REMARKS.

in a row from head to tail : this fish is shaped like an eel, but is covered with very strong scales, and is of a green colour, with the belly spotted with black : the head is defended by large long pieces or plates, and the tail is of an oval or somewhat rounded shape. This fish is an inhabitant of the Nile, where it is chiefly found, in the soft mud of the bottom. It is said to be one of the best of the Nilotic fishes, but is not often to be obtained. As it is difficult to open the skin with a knife, the fish is first boiled, and the skin then drawn off whole.

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APPENDIX

TO

THE THIRD VOLUME.

No. 1. *Extracts from the Message of Mr. JEFFERSON, President of the United States, concerning the discoveries in Louisiana.* Washington, 1806. 8vo.

P. 96. **N**EAR Natchitoches there are two large lakes; one of them fifty or sixty miles in circumference, the other upwards of thirty.

P. 106. The Mine River, which runs into the Red River (Colorado) is about 150 yards wide, and may be navigated in boats about sixty miles to the silver mine, which is on the banks of the river, the ore appearing in large quantities, but the richness of it is unknown.

P. 109. On the Red River is the nation of Panis. Mr. Brevel ascended this river from the country of the Panis, till he heard the blasting of the rock in the Spanish mines*. From the Panis to Santa Fé, in a right line, is about three hundred miles. In some part of the country pervaded by the Red River, the hunters report that the buffaloes and bears appear in droves of many thousands, that blacken the whole surface of the earth, and continue passing without intermission for weeks together, so that the whole surface of the country is for many miles in breadth trodden like a large road.

P. 116. The mouth of the Red River, at its confluence with the Mississippi, or rather the Missouri, is about five hundred yards wide. Where it is joined by the Black River, or the Washita, each of them appears about 150 yards in breadth.

P. 121. The Catahoola is a river about twelve leagues in length, running from a lake of the same

name, eight leagues in length, and about two leagues in breadth.

P. 137. On the river Washita were found pieces of coal, from fifty to one hundred pounds in weight, adjoining to which lay wood changing into the same substance. "Some pieces of this coal were very black and solid of an homogeneous appearance, much resembling pit-coal, but of less specific gravity. It does not appear sufficiently impregnated with bitumen, but may be considered as vegetable matter in the progress of transmutation to coal."

P. 145. The hot springs towards the source of the river Washita are very considerable, furnishing water sufficient to turn a mill. They have covered a large space with calcareous deposition, while they rise from a silicious rock, covered at the bottom with dark blue slate.

P. 162. On the Red River, about 150 leagues † below the post of Natchitoches, occurs a singular phenomenon called the Raft, being a natural bridge with conceals the whole river for an extent of seventeen leagues, and continually augmenting by the drifted wood brought down by every considerable inundation. This singular bridge supports a vegetation similar to that of the neighbouring forest, not excepting trees of large size; and the river may be frequently passed without any knowledge of its existence. It is said that the annual inundation is opening for itself a new passage.

* The source of the Red River, or Colorado, seems to be accurately laid down in the map of Antilles.

† Probably, says the author, computed leagues of the country, about two miles each.

P. 167. Not far from the hot springs on the Washita, but higher up among the mountains, and upon the Little Missouri *. "during the summer season, explosions are very frequently heard, proceeding from under the ground; and not rarely a curious phenomenon is seen, which is termed the blowing of the mountains; it is confined, elastic gas forcing a passage through the side or top of a hill, driving before it a great quantity of earth and mineral matter. During the winter season, the explosions and blowing of the mountains entirely cease, from whence we may conclude that the cause is comparatively superficial, being brought into action by the increased heat of the more direct rays of the summer sun."

"PANIS or TOWIACHES. The French call them Panis, and the Spaniards Towiaches; the latter is the proper Indian name. They live on the south bank of Red River; by the course of the river, upward of 800 miles above Natchitoches, and, by land, by the nearest path, is estimated at about 340. They have two towns near together; the lower town, where the chief lives, is called Niteheta, and the other is called Towahach. They call their present chief the Great Bear. They are at war with the Spaniards, but friendly to those French and American hunters who have lately been among them. They are likewise at war with the Osages, as is every other nation. For many hundreds of miles round them, the country is rich prairie, covered with luxuriant grass, which is green summer and winter, with skirts of wood on the river bank, by the springs and creeks.

"They have many horses and mules. They raise more corn, pumpkins, beans, and tobacco, than they want for their own consumption; the surplusage they exchange with the Hietans for buffalo rugs, horses, and mules: the pumpkins they cut round in their threads, and when it is in a state of dryness that it is so tough it will not break, but bend, they plait and work it into large mats, in which state they sell it to the Hietans, who, as they travel, cut off and eat it as they want it. Their tobacco they manufacture, and cut as fine as tea, which is put into leather bags of a certain size, and is likewise an article of trade. They have but few guns, and very little ammunition; what they have they keep for war, and hunt with the bow. Their meat is principally buffalo, seldom kill a deer, though they are so plenty they come into their villages, and about their houses, like a domestic animal: elk, bear, wolves, antelope and wild hogs are likewise plenty in their country, and white rabbits, or hares, as well as the common rabbit: white bears sometimes come down amongst them, and wolves of all colours. The men generally go entirely naked, and the women nearly so, only wearing a small flap of a piece of skin. They have a number of Spaniards amongst them, of fair complexion, taken from the settlement of Santa Fé, when they were children,

* From the map which accompanies the message, it appears that the Little Missouri (an absurd appellation) joins the Washita from the west, lat. 33° 45'.

who live as they do, and have no knowledge of where they came from. Their language differs from that of any other nation, the Tawakenoes excepted. Their present number of men is estimated at about 400. A great number of them, four years ago, were swept off by the small pox."

"HIETANS, or Comanches, who are likewise called by both names, have no fixed place of residence; have neither towns nor villages, divided into so many different hordes or tribes, that they have scarcely any knowledge of one another. No estimate of their numbers can well be made. They never remain in the same place more than a few days, but follow the buffaloes, the flesh of which is their principal food. Some of them occasionally purchase of the Panis, corn, beans, and pumpkins; but they are so numerous, any quantity of these articles the Panis are able to supply them with, must make but a small proportion of their food. They have tents made of neatly dressed skins, fashioned in form of a cone, sufficiently roomy for a family of ten or twelve persons; those of the chiefs will contain occasionally 50 or 60 persons. When they stop, their tents are pitched in very exact order, so as to form regular streets and squares, which, in a few minutes, has the appearance of a town raised, as it were, by enchantment; and they are equally dexterous in striking their tents and preparing for a march when the signal is given; to every tent two horses or mules are allotted, one to carry the tent, and another the poles or sticks, which are neatly made of red cedar; they all travel on horseback. Their horses they never turn loose to graze, but always keep them tied with a long cabras or halter; and every two or three days they are obliged to move on account of all the grass near them being eaten up, they have such numbers of horses. They are good horsemen and have good horses, most of which are bred by themselves, and being accustomed from when very young to be handled, they are remarkably docile and gentle. They sometimes catch wild horses, which are every where amongst them in immense droves. They hunt down the buffalo on horseback, and kill them either with the bow or a sharp stick like a spear, which they carry in their hands. They are generally at war with the Spaniards, often committing depredations upon the inhabitants of Santa Fé and St. Antoine; but have always been friendly and civil to any French or Americans who have been amongst them. They are strong and athletic, and the elderly men as fat as though they had lived upon English beef and porter.

"It is said, the man who kills a buffalo, catches the blood and drinks it while warm; they likewise eat the liver raw, before it is cold, and use the gaul by way of sauce. They are, for savages, uncommonly cleanly in their persons: the dress of the women is a long loose robe, that reaches from their chin to the ground, tied round with a fancy sash, or girdle, all made of neatly dressed leather, on which they paint figures of different colours and significations; the dress of the men is close leather pantaloons, and a hunting shirt, or frock of the same

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fame. They never remain long enough in the same place to plant any thing: the small Cayenne pepper grows spontaneously in the country, with which, and some wild herbs and fruits, particularly a bean that grows in great plenty on a small tree resembling a willow, called masketo, the women cook their buffaloe beef in a manner that would be grateful to an English squire. They alternately occupy the immense space of country from the Trinity and Braces, crossing the Red River, to the heads of Arkansa and Missouri, to river Grand, and beyond it, about Santa Fé, and over the dividing ridge on the waters of the Western Ocean, where they say they have seen large perogues with masts to them; in describing which, they make a drawing of a ship, with all its sails and rigging; and they describe a place where they have seen vessels ascending a river, over which was a draw-bridge that opened to give them a passage. Their native language of sounds differs from the language of any other nation, and none can either speak or understand it; but they have a language by signs that all Indians understand, and by which they converse much among themselves. They have a number of Spanish men and women among them, who are slaves, and whom they made prisoners when young.

"An elderly gentleman now living at Natchitoches, who, some years ago, carried on a trade with the Hiattans, a few days ago related to me the following story:

"About twenty years ago a party of these Indians passed over the river Grand to Chewawa, the residence of the governor general of what is called the five internal provinces; lay in ambush for an opportunity, and made prisoner the governor's daughter, a young lady, going in her coach to mass, and brought her off. The governor sent a message to him (my informant) with a thousand dollars, for the purpose of recovering his daughter: he immediately dispatched a confidential trader, then in his employ, with the amount of the 1000 dollars in merchandise, who repaired to the nation, found her, and purchased her ransom; but, to his great surprise, she refused to return with him to her father, and

sent by him the following message: that the Indians had disfigured her face by tattooing it according to their fancy and ideas of beauty, and a young man of them had taken her for his wife, by whom she believed herself pregnant; that she had become reconciled to their mode of life, and was well treated by her husband, and that she should be more unhappy by returning to her father, under these circumstances, than by remaining where she was. Which message was conveyed to her father, who rewarded the trader by a present of 300 dollars more for his trouble and fidelity; and his daughter is now living with her Indian husband in the nation, by whom she has three children."

"The Mandans are the most friendly well disposed Indians inhabiting the Missouri. They are brave, humane and hospitable. About 25 years since they lived in six villages, about forty miles below their present villages, on both sides of the Missouri. Repeated visitations of the small pox, aided by frequent attacks of the Sioux, have reduced them to their present number. They claim no particular tract of country. They live in fortified villages, hunt immediately in their neighbourhood, and cultivate corn, beans, squashes, and tobacco, which form articles of traffic with their neighbours, the Assiniboins: they also barter horses with the Assiniboins for arms, ammunition, axes, kettles, and other articles of European manufacture, which these last obtain from the British establishments on the Assiniboin river. The articles which they thus obtain from the Assiniboins and the British traders who visit them, they again exchange for horses and leather tents with the Crow Indians, Chyennes, Wetepahatoes, Kiawas, Kannevich, Staetan, and Cataka, who visit them occasionally for the purpose of traffic. Their trade may be much increased. Their country is similar to that of the Ricaras. Population increasing."

* Message from the President. Washington 1806, p. 25.

† Ibid. 75.

No. II. *Itineraries in New Spain, &c.*

Itinerary of M. Thierry's Journey through a part of New Spain, from Vera Cruz to Oaxaca, in the year 1777.

THIS singular journey, which the author undertook solely with a view to procure the cochineel plant and insect for the colony of St. Domingo, was performed with great secrecy, and studied concealment, partly on foot and partly on horseback. It was published in St. Domingo in 1787, two volumes 8vo. Two fragments of the manuscript, not inserted in their proper places, will be found at the end of the second volume; and some other passages appear to stand in need of correction, particularly with regard to the points of the compass.

As the work is almost unknown in England, though of a very curious and instructive nature, and as it would be found difficult to reconcile the author's route even with the most recent and improved maps of New Spain, it may be of service to geography briefly to delineate his itinerary. For this purpose we must begin with a large fragment to be found in Volume II.

Our author's sole intention was to steal from Vera Cruz to Oaxaca, to find the cochineel, but to effect this purpose it appears, Vol. II. 36, 37, he asked leave to proceed

proceed to Orizava, in order to avoid suspicion, and thence to go to Oaxaca. A great difficulty of his route lies in his regarding Orizava as being on the direct road to Oaxaca, while, by all the maps, it is quite in an opposite direction, being to the N. W. of Vera Cruz, while Oaxaca is to the S. W. Nay, on the road from Vera Cruz to Orizava he meets with carriers, *Il.* 48, travelling from Oaxaca by the route of Monte Calabaca; and he does not indicate that he is pursuing a devious route, excepting the short hints, *Il.* 36, 37; nay, if his text be correct, he talks of proceeding S. W. while by the maps it is N. W. Are we to believe the maps extremely incorrect, or to suppose that in a country, where the roads are wholly neglected, there is no direct route from Vera Cruz to Oaxaca; but that the only way that a stranger can go is the high road from Vera Cruz to Orizava, and afterwards the high road from the latter to Oaxaca? It must, however, be remembered, that while D'Anville places the city of Mexico in lat. 20°, and Mr Arrowsmith in lat. 19° 58'; yet, by the latest Spanish maps, which would better accord with Thiery, it is 19° 23', and, by the nautical almanack, followed in the tables of this work, 19° 25'. Orizava is also greatly to the S. E. of Mexico, as appears from Alzate, D'Anville, and all the accounts of that volcano, instead of being to the N. E. as Arrowsmith supposes.

Thiery has scarcely arrived at Vera Cruz, when he perceives, *Il.* 49, the mountain of Orizava to the W.

After a long days journey he comes, *Il.* 52, to the river Jamapa, and adds, page 54, that it runs into the Medellin.

Next day he arrives at Monte Calabaca; and observes, p. 60, that he had hitherto proceeded S. W. and afterwards turned more towards the S. by the map it must be N. He was now within twenty leagues of Mount Orizava.

Next day, after walking eight leagues he came to the first chain of mountains, and passes the Rio de la Punta,

(*Il.* 63, I. 180.) by a bridge, having still three leagues to San Lorenzo. Here he takes horses to Cordova, a considerable city, seven leagues from Orizava.

On recurring to Vol. I. for the remainder of the journey, we next find our traveller at Aquilungo, on the road to Tehuacan. He seems to put down the names from the pronunciation, but in fact the orthography is not regular even in the Spanish writers. This place is the Acolzingo of Alcedo. Soon after our traveller passes a part of the chain of Orizava, dividing the vale of Orizava and Cordova, from that of Tehuacan, (*I.* 74.) *Tehuacan, Tehuacan*, Al. Follows the little village Chapulco (*Clapulco*), and he soon after discovers the large and fertile vale of Tehuacan. Between San Francisco and Santo Antonio, he passes the river of Tehuacan, (also called Grande, *I.* 99) which in time of rains is thirty fathoms broad, and six deep; and after travelling seven leagues from San Antonio arrives at San Sebastiano.

His next stations are Los Cues, and Aquietepec, (which may be Cuyatepec, but more probably *Acatepec* Alc.) leaving this last, he passes a dreadful precipice by the side of the Rio Grande, and arrives at Quicatlan. See Alzates map.

Next day he again passes the Rio Grande by a ford, though two hundred fathom broad; and his subsequent route by Dominiquillo, Atetlauca, and San Juan del Rey, to Oaxaca is sufficiently clear.

On his return, he pursues exactly the same route; and on his arrival at Clapulco, sees the volcano of Orizava, though at the distance of more than ten leagues, in the form of a sugar loaf, covered with snow.

Such is this interesting journey, which shews the great imperfection of Mexican geography; but it is to be hoped that the map of M. Humboldt, who has made one hundred and forty, or one hundred and fifty astronomical observations, will greatly contribute to remove these deficiencies.

Note of the road from the city of Vera Cruz, to the capital of Mexico; being the general route both of the post, and the commerce; in the stages which exceed three leagues, are houses and farms, where post horses are to be met with, to facilitate conveyance, 1802.

<i>Fixed Stages.</i>	<i>Distances in Leagues.</i>	<i>Fixed Stages.</i>	<i>Distances in Leagues.</i>
City of Vera Cruz		Cuesta del Solado	—
Pueblo y Rio de la Antigua (Village and River of Antiquity)	—	Jolla	—
Renconada	—	Village de las Bigas	—
Cafa de Posta	— (Post House)	Village of Perote	—
Plazer	—	Caf. de Posta	—
Cafa de Posta	— (Post House)	Venta de Soto	—
Buena Vista	—	Venta de Ojo de Agua	—
Cafa de Posta	—	Village of Nopalucan	—
Town of Jalapa	—	Venta del Pinar	—
		Village of Acarete	—

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<i>Fixed Stages.</i>	<i>Distances in Leagues.</i>		<i>Fixed Stages.</i>	<i>Distances in Leagues.</i>	
Village of Amozogoe	—	3	Cafas de las Barrancas de Juanes	—	3
Village of Chachafarengo	—	2	Venta de Cordova	—	2
City de los Angeles (City of Angels)	—	2	Village de Chalco	—	2
Ventorillio	—	4	Village de Indios	—	2
Village of St. Martin	—	4	Venta del Penon	—	2
Venta del gran puente nuevo	—	4	City of Mexico.	—	2
Cafas viejas	—	3			
Venta de Rio frio	—	3			
					97 Leagues.

About eight years ago, a new road was undertaken from the City of Mexico, which is already completed according to this route, as far as Amozoguc. — It is in a state of forwardness, and will be soon finished through the Villages of Acacingo, Quichula, St. Augustin del Palmar, St. Andres, the towns of Orizava and Cordova, and by Medellin to Vera Cruz.—This road will facilitate the intercourse by wheel carriages, which the old road to Perote does not permit. From the village de las Bigas, the whole road to Mexico is *terra*

pluada, which, I suppose, means a regularly made road.

There is another road which the Viceroy sometimes pasa, in order to make their public entry by the Church of our lady of Guadalupe, at Piedras negras. It leaves the road pointed out two leagues from Perote, and joins it again at the Village of St. Martin.

At each branch of Rio Antigua, there are canoes to ferry passengers and goods; at all the other rivers are bridges of stone.

Mines of Mezquital.

Bowles, in his introduction to the *Natural History of Spain**, has mentioned some specimens, which he had analyzed, from the gold mine of Mezquital in New Spain; and, as it appears from Alcedo, in New Galicia, about eighteen leagues to the N. E. of Guadaluazara. The gangue is a white quartz, mingled with a smaller quantity of another quartz of a horn colour. Some green spots appear in the form of veins,

which being examined by the microscope, are little crystals resembling groupes of emeralds, containing in the inside very small particles of gold. Mr. Bowles had some suspicion of the presence of lead, but found by experiments that there was none. Buffon has twice quoted this passage in his *Mineralogy*, which continues to have its value chiefly from the notes and authorities; but he seems to suppose that the green crystals are real emeralds, which is not warranted by the description of Bowles.

No. III. *Routes in South America.*

In the *Mercurio Peruano* there is an account of the navigation from the Laguna on the Gualaga to Tefi, by Don Juan Salinas, governor of Maynas. Large barks laden with merchandize take twenty days, supposing

them only to sail twelve hours each day. But the ascent from Ten to the Laguna requires nearly thrice that time, viz.

	<i>Days.</i>		<i>Days.</i>
From the port of Tefi to that of Cayfara	— 1	To that of Loretto	— —
To Tontevoa	— 7	To Camucheros	— —
To the port of Matura	— 8	To Pevas	— —
To San Pablo	— 3	To Napeanos	— —
To Yaguari	— 6	To Omaguas	— —
To the frontier of Sapatinga	— 1½*	To San Regis	— —
		To Urarinas	— —
		To the Laguna	— —

* Thus far all the places are Portuguese.

59

From

From another route it appears that the mouth of the Putaza is only two days from the Laguna, descending the Tunguragua; but, as usual, six on the ascent.

The route is also given from the Laguna to Lima, as follows; but from Lima to the Laguna only twenty-three days are employed.

	<i>Days.</i>		<i>Days.</i>
From the Laguna to Yurimaguas	— 3	To the port del Valle	— — — 2
To the junction of the Moyobamba with the	—	To Sion	— — — 1
Gualaga	— 7	To the port of Pampa-Hermosa	— — — 3
To that of the Huayabamba	— 3	To Playa-Grande	— — — 8

Hence the journey to Guanuco over land requires four days; and that from Guanuco to Lima is performed in eight.

runa to Lima, as
ma only twenty-

Days.

2
1
3
8

ima is performed

CATALOGUE OF MAPS,

AND OF

BOOKS OF VOYAGES AND TRAVELS.

*In the Maps the Letter L denotes the Large, M the Middle, S the Small, as explained in the Preface. A complete Catalogue of Books of Voyages and Travels might fill Two octavo Volumes; but here only a few of the most useful and interesting are enumerated, especially the more modern**

Globes.

BY Adams, Cary, Bardin. The last, from drawings by Mr. Arrowsmith, with the newest discoveries, are deservedly esteemed; and the celestial globes are also executed with great care and precision. In Cary's celestial globe, 1798, the constellations are only marked by bounding tints, and the eye is not distracted with the ridiculous figures of animals, &c. Some astronomers however, and they are the best judges, prefer the ancient figures, on account of speedy and accurate reference†.

Planisphere.

By Arrowsmith, 4 Sheets, 1794, &c. tolerable. His pamphlet called "A companion to a Map of the World," explains the projection, and contains some valuable information. There are planispheres published at Vienna, &c. stereographically projected for the horizon of the place of publication ‡.

* The most commodious form of arranging maps in a library seems to be that lately adopted, of pasting them on canvas, and putting them into a case which stands erect like a quarto volume, there being six folds in the sheet of large atlas paper. The volumes being titled on the back, and each map or part labelled, it may be consulted with ease, without the trouble of a large bound atlas, or the confusion of detached sheets.

† In general geography Varenus may still be consulted, with the first and only volume of Macfart, Edin. 1780, 8vo. There is a *Catalogue Raisonné des Cartes* by Julien, 1774, 2 tomes 8vo. now rather antiquated: he was also, it is believed, the vender of Homann's maps.

‡ Boullanger's map of the world, 1760, is on the horizon of VOL. III.

Smaller Planispheres by Faden, Harrison, &c. Northern and Southern Hemispheres, Faden, 1 sh. 1802, bad.

On Mercator's Projection.

Of this Mercator was not however the author, as it was used long before his time. The best on this projection is that by Arrowsmith, 1790, &c. 8 sh. That of Faden, 1 sh.

EUROPE.

Maps. L. By De Bouge, Vienna, 1799, 50 half sh. middling. By Sotzmann, in 16 sh.

M. By D'Anville, 6 sh. 1754. Arrowsmith, 4 sh. 1798.

S. Faden, &c. 1 sh. 1791.

Books. The Geography of Busching in German, or the French translation, 1785; 14 vols. 8vo. a prolix work, but containing excellent materials. Supplemental to Busching's Europe are the America of Ebeling, 1797, and the Africa of Bruns, 1799; the former tedious, the last good. Asia was begun by Borheck 1793, but seems incomplete. In the French abstract of Busching by Berenger, Lausanne, 1776, &c. 12 vols. 8vo. tolerable accounts of the other

a point 45° of the height of the pole towards the north. In 1774 Father de Gy published one similar, projected on the horizon of Paris. These maps present, under one point of view, the four parts of the world, which, as Fleureau says, nature has assembled under the same hemisphere.

6 E

regions

regions are added, but the want of references renders them unsatisfactory.*

England.

L. The surveys of the several counties, particularly Surrey and Sussex, by Linley and Gardner, which are trigonometrical. Some of the best surveys are published by Faden.

The grand trigonometrical survey of England has appeared before the public, in part of Essex; (the map of Kent being a specimen of the plates, but not of the plan.) It excels in accuracy, abundance of positions, clearness, and beauty. The whole sheets are filled to the edges; and when finished will compose one uniform map, like Cassini's map of France.

M. Smith's Atlas. Cary's Atlas of the counties. Cary's England and Wales, 81, 4to. sh. La Rochette's map, 12 sh. Andrews, 6 sh.

S. Kitchen's map, 4 sh. Faden, &c. 1 sh. 1800. The maps in Saxton's Atlas, and Speed's Theatre, may be consulted for the sake of curiosity.

Camden's Britannia. Aikin's England Delineated. Pennant's Tours. Campbell's Political Survey, a tedious, but useful work. Arthur Young's Tours. Voyage de Faujas, &c. &c.

Wales.

The maps by Evans, 9 sh. Reduced 1 sh. (North Wales). Of South Wales there is an old bad map by Bowen, 6 sh. Pennant's Tours, Evans's Cambrian Itinerary, Aikin's Journey, &c. &c.

Scotland.

L. The surveys of various counties.
M. Ainslie's Map, 9 sh. Dorret's map, 1750, 4 sh. several mistakes.
S. General Roy's map, very scarce. Pennant's, &c. Ainslie's reduced. All 1 sh.

Statistical Account, 21 vols. 8vo. Camden's Britannia, by Gough. Pennant's Tours. Scotland Delineated. Voyage de Faujas, &c. Volkmann's Travels in Scotland and Ireland, Leipzig, 1784, 8vo.

Ireland.

L. Surveys of some counties.
M.

* Exclusive of the old systems of geography by Moll, &c. there are in English Bowen's, 1747, 2 vols. fol. maps; Middleton's, 1777, 2 vols. fol. maps; but the best of the kind is that by Fenning or rather Collyer, who informs us that Fenning only wrote, the astronomical introduction. The fourth edition is 1773, 2 vols. fol. with maps by Kitchen. It is, like the others, a decent compilation of the more amusing parts of geography, but is totally deficient in discussion or information strictly geographical. Vol. I. contains Asia and Africa; Vol. II. Europe and America. It is unnecessary to mention the successive *grammars*, as they are absurdly called, of Gordon, Salmon, and Guthrie. Many mistakes of the latter may be traced in Collyer who preceded, neither of them being versed in geography as a science.

S. By Dr. Beaufort, 1792, 2d edit. 1797, 2 sh. Dr. Beaufort's map reduced, 1 sh. Faden. Taylor's, 1793, 1 sh. Faden.

Young's Tour, 2 vols. 8vo. excellent. Camden's Britannia, &c.

France.

L. Cassini's, 183 sh. begun in 1744, 70 sheets were executed before 1767; and the whole was not completed till very lately (about 1794.) Atlas National, 85 sh. neat, the mountains being etched, so that the shade does not injure the lettering. Pyrenees by Rouffel, 8 sh. 1730. Hundsruck by Hardy, 6 sh. Auvergne by Pafumot, &c.

M. The smaller Atlas National. Several sheets reduced from Cassini, Faden, &c. &c.

S. On the scale of D'Anville's Ancient Gaul, 1780, 1 sh. Faden's, &c. 1792, 1 sh. Index sheet to the large map of Cassini.—In departments by Belleyne, 4 sh. *France Physique*, or a map of France, shewing the mountains, rivers, &c. by Buache, 1 sh. French Empire, 1805, 1 sh. excellent; the mountains are for the first time, on a small scale, inserted topographically.

Voyage dans les Départements, a declamatory work, full of the new philosophy and sentimental hypocrisy. Description General, Paris, 1781, folio. Voyage Pittoresque, Paris, 1784, folio. Arthur Young's Tour, solid and excellent. Moore's View of Society in France. La Croix Géographique.*

Netherlands.

L. By Ferraris, 25 large sh.
M. Atlas des Départements Belges. By Schreml, from Ferraris, 4 sh. Frontiers of Holland from Ferraris, Faden, 1 sh.
S. By Crome, 1 sh. Reduced from Ferraris, by Faden, 1 sh. 1789.

Rapports Statistiques, Voyage de Lecamus, Reichard.

Russia in Europe.

L. Maps of the several governments, but these are in the Russian character and unfit for general use. The same, recent, 9 sh. Some governments by Treffcott, &c. in Latin.

Dezanchi's map of the Crimea. The Krim, by Kinsbergen, 4 sh. Van Kullen's Chart of Spitzbergen 2 sh. &c. &c.

M.
S. Russian Empire, 3 sh. Petersburg, 1789. By Treffcott and Smidt, 1776, 3 sh. Post map to Tobolsk, 2 sh. Reduced map, 1 sh. London. Kyrelop's map, 1734, 2 sh. curious.

† Reichard's *Guide des Voyageurs*, Weimar, 1805, 3 vols. 8vo, will be found very useful for travellers throughout Europe in general.

Tooke's

Tooke's View of the Russian Empire, 1799, 3 vols. 8vo. Tooke's Russia, 1781, 4 vols. 8vo. Voyage de Pallas, Paris, 8 vols. 8vo. Histoire des Decouvertes, &c. Lausanne, 1784, 6 vols. 8vo. Giorgi's (pr. Chiorghi) description of all the nations in the Russian empire, Petersburg, 1776 to 1780, 4 vols. 4to. in German or in French. Coxe's Travels, &c. Voyages de deux François, &c. by Fortia, 5 vols.

Austrian Dominions.

L. There are large provincial maps of most of the Austrian Dominions, and the most modern are generally the best; among the others may be mentioned, Atlas of Tyrol, 12 sh. by two peasants. Tyrol by Mollo Vienna, 1801, 4to. Atlas of Bohemia, by Müller, 25 sh. Military Atlas, 20 sh. Moravia, by Venuto, 2 sh. Gallitz and Lodomer, by Liefkany, 42 small sh. Hungary, by Artaria and Company, 4 sh.: By Schrenck, 4 sh. better: By Gen. Lafcy, 12 sh. the best. Transylvania, by Schrenck, 2 sh. Slavonia, &c. by the same, 2 sh. Atlas of Gallitz and Lodomer, with the Bukovin, by Maire, 12 sh.

M. Austria, by the Artarian Company, Vienna, 1800. 1 large sh. Bohemia, by Schmettau, 4 sh. Venice, &c. by Santini. Chauchard's Germany. Oblong Atlas, by Kempen, too minute and crowded. Western Gallitz, by Lichtenclern, 1 sh.

S. Austrian dominions, 1 sh. by Baron Lichtenclern, 1795; this map embraces the Netherlands. Hungary, by Windisch, 1 sh.; the same in Townson's Journey, 1 sh. Müller's Bohemia, reduced, 1 sh. Bannat, 1 sh.

Townson's Travels in Hungary. Riefbeck's Travels. Wraux's Memoirs, Born's Travels in Hungary and Transylvania, and in the Bannat. Beaumont's Rhetian Alps. Dalmatia, by Fortia.

Prussian States.

L. Poland and Prussia, by Zannoni, 25 sh. Atlas, by Sotzmann, 21 sh. All the provinces published separately. Atlas of Silesia, by Mayer, 20 sh.

M. Sotzmann's, 16 4to. sh.

S. Prussian dominions, a French map reduced from Sotzmann, 2 sh. Reduced by Sotzmann, 1 sh. 1800.

Marshall's Travels *. Coxe, Riefbeck. Wraux, &c.

* The author was told by the learned Fabricius at Paris, that these travels were written by Sir John Hall; and he has been favoured with a letter from Mr. Kirwan, in which he says, "I have strong reasons to think Marshall's travels an imposition. Mr. Sheridan, who was envoy to Sweden, and wrote an account of the revolution, told me he was in Sweden a year or two after Marshall said he had been there, and enquired of all his acquaintances in Stockholm whether they had known or heard of such a person, and all denied they had; but what is more, no such noblemen as Marshall named ever existed in Sweden, as Mr. Sheridan was assured." This is to be regretted, as the plan and enquiries of these travels are useful: and the materials may have been authentic.

Spain.

L. The geography of this country is imperfect; the best atlas is that of Lopez, but it is poorly and inaccurately executed. The coasts have been drawn by Tolino, the royal astronomer, with great care, and published at Madrid 1798. As Lopez remains the chief authority for the interior, a brief view of his work may be proper.

Atlas Geographico de España, compuesto por Don Tomás Lopez y Vargas, Geografo por S. M. de Sus Reales Dominios, de la real Academia de S. Fernando, de la real Sociedad Bascongada, &c. Madrid 1792. Imperial 4to. Map. 1. Ancient Spain. 2. Modern Spain, single sh. 1788; longitude from the Peak of Tenerif. He accuses the foreign maps of errors in the division of the governments, and the course of mountains and rivers. 3. The Pyrenees, from Saunion. 4. Modern Spain, 4 sh. by Lopez, 1792. 5. Province of Madrid. 6. Ditto of Toledo. 7. Archbishopric of Toledo, 4 sh. Then about 36 provincial maps, with Majorca, Minorca, Iviza, or Ivisa. Some copies also contain the States of Barbary. The harbours of Tripoly and Tunis. The bay of Algiers, with the attacks 1781 and 1784. Plans of other African harbours. The islands Azores. The Canary Islands. Particular maps of the Canary Islands. Chart of the Gulf of Mexico, and of the West Indies. Cuba. Hispaniola. Porto Rico. The Lesser Antilles, or Caribbee islands. The islands Lucayos. The environs of Mexico. Tierra Firme. Province of Carthage. Other American provinces. Plan of Quito. Marianne Islands, by Lopez, 1784. In Spanish maps the north is marked by a Castle, the badge of Castile.—Minorca, 2 sh. by de la Rochette, 1780.

M. Spain by Mentelle and Chanlaire, Paris 1799, 9 sh. well engraved, but very inaccurate as all Mentelle's works.

S. by Lopez, 4 sh. By the same, 1 sh. Faden, 1 sh.

Townsend's Travels. Bourgoing, (the best). Barretti. Link, &c. Those of Dillon are chiefly translated from Bowles's Spanish work on the natural history of the country. Ponz, Viage de España, 12 vols. 8vo. Madrid, 1776 *. Swinburn's Travels, 4to. Fischer's Travels, 1801, 2 vols 8vo. Fr. tr.

Turkey in Europe.

L. Geography very imperfect. Moldavia by Bawr, 6 sh. Moldavia, &c. 1788, 2 sh. Danube by Mansfeld, 7 small sh. The same by Martigli. Bulgaria by Schenk. Bessarabia, &c. by Gullefeld. Greece by D'Anville; and the Atlas to the Travels of Anacharsis. The Propontis by Zemenic; by Chevalier, 2 sh.; and the two Straits published by Faden, 1786, (by La Rochette.)

* There are many other large descriptions of Spain, as the Athente Espanol, 14 vols. 8vo. There is also a Geographical Dictionary by Morpahu, &c.

Rhode's confines of Austria, Russia, and Turkey, 6 sh.
 M. Wallachia by Ruhendorf, 1788, 1 sh. curious.
 Northern part of Ottoman Empire by Zannone, 3 sh.
 S. Turkey in Europe by Arrowsmith, 2 sh. Faden's
 Map, 1 sh. Greece by La Rochette, 1 sh.

The travels in Greece and the Levant are innumerable. Among the best are Wheeler, Chandler, and Tournefort, with the *Voyage Pittoresque*, and Stewart's *Antiquities of Athens*. D'Ohsson *Tableau de l'Empire Ottoman*, 2 tomes fol. The last by Olivier, 1802, is only another voyage to the Levant. Yet the northern and western parts of Turkey in Europe have been rarely visited. Boscovich *Viaggio da Costantinopoli in Polonia, con una sua relazione delle rovine di Troja, Bassano, 1784, 8vo.*

Holland.

L. There are provincial maps of all the provinces, but the new survey will be preferable. Wiebeking's Holland and Utrecht, 1790, 8 sh. North Holland, 16 sh. Reduced, 4 sh.

M. The United provinces by Zepp, a good clear map.

S. The Seven United Provinces, with the Land of Drent and Generality Lands, 1794, by Faden, 1 sh. Mr. Faden's maps are in general highly to be praised for accuracy and neatness.

Ray's Travels. Those of Mrs. Radcliffe, &c. &c. *Februre Itineraire*, 1748, 2 tomes, 12mo, Pilati, 1780, 2 tomes, 12mo. Reichard.

Denmark.

L. Most of the provinces are completed under the direction of Bygge the astronomer; and some good maps of the shores, &c. have been published by Lowenorn.

M. The Isle of Zealand, &c. by Wessel, 1777, 1 sh.
 S. Denmark Proper, (by E. P.) Copenhagen, 1763, 1 sh. miserably engraved. Norway by C. J. Pontoppidan, 1785, 3 sh. good, and decently engraved. The same in Baron Hermelin's reduced map. Iceland by Erichsen and Clavius, 1780, 1 sh. but the projection is erroneous, the length being one third too great: See the voyage of La Crenne, Paris 1778, and the *Journal of Zach*, vol. vi. The *Ferroe Isles* by Lowenorn. Norway and Sweden, 1 sh. Faden. The same, Pontoppidan, 1 sh. There are several maps of Denmark, Sweden, Norway, and Iceland, all completed in 1 sh.

Coxe, &c. Von Troil's Iceland. The map is carefully drawn, and among other omissions are the names of the rivers: In p. 5, there must be some gross error in distance. Voyage to Norway by Fabricius, 1779, in German or French.

Sweden.

L. Baron Hermelin's Atlas of the Provinces, Stockholm, 1797, is excellent, and adorned with interesting prospects in Lapland, &c.

M.
 S. Hermelin's reduced map. Faden's by La Rochette, 1794.

Travels of Maupertuis, Coxe, Wrazall, &c. *Voyages de deux François*, 5 vols.

Portugal.

L. The geography is perhaps worse than that of Spain: and Link has pointed out many gross errors in the maps by Lopez, &c. A new survey is in progress.

M. By Lopez, in 8 sh. bad. By Jefferys, improved by Gen. Rainsford, 6 sh. new edition, 1790.

S. The chorographical map by de la Rochette, published by Faden, 1797, 1 sh. perhaps the best yet executed. Compare it with that by Lodge after Zannoni. For a gross error of Lopez see Link, p. 257.

Link's Travels, 1801, 8vo. the best account yet given of the country. Murphy, Southey, &c. *Lima's Geography of Portugal*, 1736. Description of Portugal, Lisbon 1785, with an account of Portuguese saints.*

Switzerland.

L. The Atlas by Weiss, geographical engineer, Strasbourg, an 8, 1800, &c. excellent.

M. The old map by Scheuchzer, 4 sh.
 S. The reduced map by Weiss, 1 sh. excellent. By Mehel, 1799, 1 sh. good. That in Coxe's Travels is of little value, from the great superiority of these two.

Coxe's Travels, the best of all the modern series. Bourrit, *Description des Glaciers*. The celebrated Travels of Saussure to the Alps chiefly relate to the French and Italian chains.

German States.

L. There are large maps of most of the electorates. Saxony: The military atlas, &c. and the maps of the districts. Brunswick Lunenburg, or Hannover: many maps of the districts. Mecklenburg Schwerin, 16 sh. Strelitz, 9 sh. Duchy of Berg, 4 sh. On the *Soub of the Mayn* there is an atlas of Bavaria by Riedl; and an atlas of Suabia, (including, of course, the Duchy of Wurtemberg,) in 30 sh. The Duchy of Wurtemberg by Vischer, 1 sh. Of all the other states there are also topographical maps†.

M.

* Of the Azores, the most recent account is that of Adanson, in his *Voyage to Senegal*, 1759, 8vo. There is a detached map by Lopez; and another by Simpson, published by Laurie and Whittle. One by Tosno, 1 sh. excellent. By Bellin, 1 sh. 1755.

† The maps of Homann are now of no use except for German provinces. Homann of Nuremberg died in 1784; but his heirs and successors

M. Chauchard's map of Germany (9 sh the supplement may be well omitted), has a deserved reputation; but it is to be regretted that he has not specified the mountains and hills. Maps of Germany, north and south of the Mayn, are wanted on a large scale. The Electorates, &c. may be had in single sheets. Wiebeking's Lower Rhine, or Frontier between France and Germany, 10 sh.*

S. A map of Germany in 4 sh. by Covens, b. d. By Zannoni, middling. By Klein, in some estimation. Germany, 4 sh. by la Rochette, very poor. Dominions of the King of Great Britain in Germany, 1 sh. Faden, 1789. Germany, from the map by the Royal Academy at Berlin, Faden, 1788, 1 sh. The German rivers, 4 sh. The same, 1 sh.

Riesbeck's Travels the best general journey through Germany. Nugent's in Mecklenburg, dull. The Travels on the Rhine by Mrs. Radcliffe, Cogan, Gardnor, &c. Travels in Germany are either too local, or embrace France and Italy, as Keysser, &c. &c. In German are those of Nicolai, 8 vols. Leske in Lusatia. The Hartz by Lafus; or the iter of Ritter, 1740, 4to. On the S. of the Mayn, Bianconi's Bavaria, and the German works of Hacquet and Gerken.

Italy.

L. The maps of the various states divided into provinces, &c. States of the King of Sardinia by Borgognini, 2 sh.; copied by Faden, 1765, 12 sh. Ligurian Republic, 8 sh. Republic of Genoa by Chaffrion, copied by Faden, 1783, 8 sh. An excellent large new map of Naples, by Zannoni, is in progress. Campaigns of Bonaparte by Bacler Dalbe.

M. Each of the states on one sheet. Naples by Zannoni, 1769, 4 sh. Sicily by Schmettau, 4 sh. good and scarce. Dominions of the Church, by Maire and Boscovich, 3 sh. Lombardy, &c. by Zannoni, 4 sh. very rare. Cisalpine Republic by Delamarche, 2 sh. Malta and Gozo by Palmeus; copied by Faden, 1799, 2 sh. &c. King of Sardinia's dominions by Caroly, 4 sh. For Venice, Dalbe's Campaigns of Bonaparte.

S. Italy by D'Anville, 2 sh. excellent. The same improved by la Rochette, and published by Faden, 1800, 4 sh. by Zannoni, 1802, 2 sh.

The travels in Italy are very numerous. Among the best may be mentioned Cochin, 3 vols. 8vo. Paris

successors continued to publish maps under that name for forty or fifty years; and among the latter there are some of German provinces executed by able hands. See a memoir concerning Homann in the Geograph. Ephemer. Nov. 1801, p. 464. There are some good recent maps of German provinces by Mannert of Nuremberg. Jaeger's Germany, 11 sh. coarse. Hanover Post map, 4 sh.

* Wiebeking's maps of the Rhine, 1796, are very complete.

1773, useful for artists. Lalande, 9 vols. 8vo. with an atlas, Paris 1786, a good general compilation*. Martyn, London 1791, 2vo. the best short guide. Moore's View of Society and Manners in Italy. Dr. Smith's Travels, 1-93, 3 Vols. Young's Travels in France, for the north of Italy. To which may be added the travels of Ferber, Spallanzani, and Tozzetti, &c. and the *Diarium Italicum* of Mountfaucon. Swinburn's Travels in the Two Sicilies.

ASIA.

By D'Anville, 6 sh. still a valuable map for consultation and comparison. By Arrowsmith, 1801, 4 sh. the best extant.

Turkey in Asia.

By Hazius, Vaugondy, &c. 1 sh. The Euphrates and Tigris by D'Anville. Palestine by the same.

The travels of Sandys, Wheeler, Chandler, &c. &c. Maundrell's Journey to Jerusalem. Ruffe's Aleppo, &c. Mariti's Cyprus. Browne, Volney, &c.

Asiatic Russia.

The maps of the governments are of little use, being in the Russian character. Those of the Russian empire have been already mentioned. There are, at present, maps of some of the governments by Trescott and others. The two Latin maps of the river Irtysh, by Isenief, are curious and important; as is Mr. Ellis's Map and Memoir of the country between the Caspian and the Uxine, 1788.

Voyage de Pallas, Giorgi, &c. These interesting travels are abridged in the *Histoire des Decouvertes Russes*, Berne, 6 vols. 8vo. Patrin's accounts in the *Journal de Physique*, &c. Muller, *Histoire du fleuve Amur*, 1766, 12mo. Bell's Travels, &c.

Chinese Empire.

Atlas by D'Anville, which ought to accompany the work of Du Halde. There are 42 maps of various sizes, of which 16 contain China Proper and its provinces, actually surveyed, in the course of many years, by the jesuits, and probably with as much accuracy as the methods and instruments then used would admit. Eastern Tatar, or more properly the country of the Mandshurs and Mongols, has also some claims to accuracy, as the jesuits attended the emperor on frequent journeys into these provinces: but to the west of the river Etzine little dependence can be placed; and the delineations of Little Bucharia and Tibet are certainly grossly inaccurate.

* The Description Historique of Richard, 6 vols. 8vo. is preferred to Lalande.

† In general the best maps of Asia, America and Africa, may be consulted for each country.

Tatary

Tatary by Witten, 1687, 6 sh. curious, must not be confounded with that by De Witt, 1 sh. by Strahlenberg, 1737, curious.

The best small map of China is that of D'Anville, 1 sh. This country is also well delineated in his Asia, and in that of Arrowsmith. Part of the empire is illustrated in the maps of Isenietz, and the Russian maps of the boundaries. See also the maps in Grosier's account of China; but particularly those in the *Histoire Generale de la Chine*.

Nieuhoff's Voyage, excellent. Du Halde's China. Ozbeck's Voyage. Gaubil's Genghiz Khan, Paris, 1739, 4to. for the Chinese geography of Mongolia. The *Memoires Chinois* by Amyot, Paris, 15 vols. 4to. chiefly relate to the manners, sciences, and history of the country: but the *Histoire Generale de la Chine*, 12 vols. 4to. is an interesting work, and a singular monument of French science. Add the excellent Travels of Bell, 2 vols. 4to. or 8vo.; and particularly Sir George Staunton's Account of the Embassy to China, and Van Braam's Travels.

Japan.

There is no good large map, those of Kämpfer only displaying part of the coasts along which he travelled, while his general map is small. D'Anville has made some improvements; and there is a map in one sh. by Robert*.

Kämpfer's Japan, and Thunberg's Travels, both excellent.

Birman Empire, &c.

The maps in Mr. Symes's Journey. The geography of Exterior India is very imperfect, but expected to be improved by the researches of Mr. Dalrymple. For Siam D'Anville's map of Asia may be consulted; and for the outline of the coasts the charts of D'Après, which are deservedly esteemed.

Symes's Journey. Loubere's Siam. Turpin, *Histoire de Siam*, Paris, 1771, 2 vols. Richard, *Histoire de Tonquin*, Paris, 1778, 2 vols. 8vo. Mr. Barrow's *Cochinchina*.

Hindostan.

Rennell's map, 4 sh. La Rochette's, 1 sh. good, 3d edit. 1800. Rennell's Atlas of Bengal, His map of the southern part, dated 5th April 1800. D'Anville's *Hindostan* is antiquated and full of mistakes. Peninsula of India, Faden, 1795, 2 sh.

Hamilton's New Account of the East Indies Edin. 1727, 2 vols. 8vo. Voyage de Bernier, excellent, though old. Bartholomæo (Weldin's) Voyage, excellent for the southern parts. Hodges's Travels. Voyage de Soumrat, 2 vols. 4to. The account by Tiefen-

* Messrs. Robert, the father and son, were geographers of considerable reputation, particularly Robert, styled de Vaugondy.

thaler, in Bernoulli's collection, is a dull and tedious chorography. Knox's Ceylon, &c. Percival's Ceylon.

Persia.

There is no large map of this interesting country. That of Delisle* in 1 sh. may be compared with the Asia of D'Anville or Arrowsmith. The materials are vague and imperfect; and there can be little dependence on the longitudes or latitudes even of the best Oriental geographers. The recent map by Wahl is illegible; but deserves to be re-engraved in a superior manner, and on a larger scale. That of La Rochette, to illustrate the marches of Alexander, is very beautiful, and drawn up with considerable care. Georgia and Armenia, 4 sh. 1780.

Voyage de Chardin, 4 vols. 4to. Thevenot's Travels, bad. Tavernier, good. Le Brun, bad, and the plates seem to be frequently fabrications, as usual in the Dutch books of travels.† Hanway's Travels are good, though prolix. The Journey of Franklin instructive and amusing for the southern part, while the northern is well illustrated by Gmelin. After Olivier's first volume, little can be expected from his second. Otter's Journey, 1742, ranks among the best, but he is too full of quotations from the Oriental geographers. Della Valle esteemed. The Journey of Olearius, or of the Envoys from Holstein.

Arabia.

Maps of several provinces occur in Niebuhr's description; and it is to be regretted that he did not publish an entire new map. There is an old map by Vander Aar; but the best are those in the Asia of D'Anville and Arrowsmith, the former is published apart by Laurie and Whittle, as are likewise Peritia, and Turkey in Asia.

Niebuhr, Voyage en Arabie, 2 tomes, 4to. and his Description de l'Arabie, 1 tome, 4to. To which may be added, la Roque Voyage en Arabie Heureuse, and the Voyage dans la Palestine, Paris, 1717, 8vo. which contains Abulfeda's Description of Arabia.

Asiatic Islands.

Chart by Arrowsmith, 4 sheets, tolerable. D'Anville's Asia. Map of Sumatra, in Mariden. Of Java, Borneo, &c. in Valentyn. The Philippines, D'Anville or Arrowsmith's Asia. Of the interior of Borneo, Celebez, &c. little is known.

Mariden's Account of Sumatra. Forrest's Voyage to Papua. Voyages of Stavorinus, &c. &c. Valentyn's account of the Dutch possessions in the East

* There is one by H. Mann of Nuremberg; but that manufacture is in little esteem. In the Voyage of Niebuhr there is an interesting map of the vicinity of Persepolis.

† Those published by Vander Aar are particularly obnoxious; the prints, as in Mandelslo 1719 or 1727, being often transferred from old books; nay, sometime, the same view will serve for a great number of places, whether they stand on rocks or plains.

a dull and tedious
Percival's Ceylon.

interesting country.
pared with the Asia
materials are vague
little dependence on
the best Oriental geo-
graphers is illegible; but
in a prior manner, and on
the whole, to illustrate the
country, and drawn
by a and Armenia, 4 sh.

Thevenot's Tra-
vellers, bad, and the
descriptions, as usual in the
Travellers are good,
Franklin instructive
while the northern
part of Olivier's first vo-
lume is second. Otter's
Travels, but he is too
much of a geographer. Della
Cecilia, or of the

in Niebuhr's descrip-
tion that he did not pub-
lish an old map by Van
der Afa of D'An-
ville published apart by
Peria, and Turkey

tomes, 4to. and his
4to. To which may
be added Heures, and
1717, 8vo. which
of Arabia.

a tolerable. D'An-
ville's Mariden. Of Java,
Philippines, D'Anville
of Borneo, Ce-

a Forrest's Voyage
to, &c. &c. Valen-
tine's, in the East

ing, but that manufac-
ture there is an interesting

particularly obnoxious;
1727, being often trans-
lated the same view will serve
they stand on rocks or

Indies,

Indies, published about 1738, consists of eight large folio
volumes, with upwards of a thousand copper plates,
and is extremely rare even in Holland. Sonnerat
Voyage de la Nouvelle Guinée, 4to. only to the Isle
Gibby. Thunberg, Labillardiere.

AUSTRALASIA.

New Holland, &c. in Arrowsmith's Chart of the
Pacific, 9 sh. The same reduced, 1 sh.

De Broffes Histoire des Navigations aux Terres
Australes, Paris, 1736, 2 vols. 4to. excellent. Dal-
rymple's Collection of Voyages in the Pacific, 2 thin
vols. 4to. and supplement, curious and interesting.
La Bourde Hist. de la Mer de Sud, Paris, 1791, 3 vols.
8vo. bad. Cook's Voyages. Governor Phillip's Col-
onia's History of the Colony, 4to. &c. Voyage de La-
billardiere, 2 vols. 4to.

POLYNESIA.

Arrowsmith's Chart of the Pacific. Maps in De
Broffes; and of Otaheite and Tongataboo in the
Missionary Voyage. Islands of Navigators, in that of
La Perouse, &c. &c.

Cook's Voyages. Captain Bligh's. Those of La
Perouse and Labillardiere. The Missionary Voyage.
Gobien's Account of the Ladrões. Description of
the Caroline Islands in the Supplement to De Broffes,
&c. &c.

AMERICA.

North and South by D'Anville, 5 sh. 1746, 1748,
or by Green, 1753, for the progress of the geography.
But there is no recent general map of this continent,
which can be recommended. That of Delisle, 1739,
1 sh. curious, and exact for the time. By La Ro-
chette, 1797, 1 sh.

Morse's American Geography, 4to. or 8vo.

NORTH AMERICA.

Arrowsmith's Map, with improvements and addi-
tions to 1802, about 5 feet by 4, excellent. It is to
be regretted that the Spanish dominions in North
America are not included. For these recourse must
be had to D'Anville, or to the map of the West Indies
by Jefferys, 16 sh. or by Arrowsmith, 1803.

United States.

L. There are maps of most of the provinces; and a
general Atlas published at Philadelphia, but in little
esteem.

M. Arrowsmith's map, with corrections to 1802,
4 sh.

S. Single sheet, common. The provinces in Mr.
Morse's work.

Morse's Geography. The travels of Kalm, Burna-
by, Weld, Rochefoucault, Briffon, &c.

Spanish Dominions in North America.

A great deficiency in the geography, as the Spa-
niards are peculiarly jealous of these rich settlements,
their chief tenure on the new continent. The Mexican
dominions in general seem delineated with considerable
accuracy in the map of the West Indies by Jefferys,
16 sh. corrected and improved to 1792; and the
same reduced, 2 sh. or Bolton's map in Pottle-
thwayte's Dictionary of Commerce. There are maps
of some provinces by Lopez. Others by Sanson of
Old and New Mexico, &c. California by Costanzo,
2 sh. 1771. New Spain, by Alzate, in Spanish,
1 sh. Plan of Mexico in D'Auteroche (the N. is on
the right hand.) The environs of Mexico may be found
in Careri, from a drawing by Boët, an engineer em-
ployed to drain the lake. Another in Clavigero. The
bay of Honduras and environs are published apart by
Faden. A new map of the Spanish dominions in
North America, excluding the West Indies, is greatly
wanted. Perhaps Humboldt's is already published.

Recourse may be had to old writers, the best being
Gage, 2d edit. 1655, fol. or the French translation,
Amst. 1721, 2 vols. 12mo. The 6th, or last vol. of
Gemelli Careri contains New Spain. This work is
now acknowledged by the best judges to be genuine,
and a voyage round the world has ceased to attract
much observation, as there would be little difficulty
in passing to China, and thence to America and Eu-
rope. There seems no doubt that Careri performed
this circuit: the fault is that the book is rather a
diary of trifles, than a work of solid information.
There is a Spanish history of Cinaloa by Perez de
Roxas. The voyages of Pagès round the world
and to the north and south pole, seem very doubtful,
as may be judged, among other circumstances, from
his description of Mexico. The best recent account
of Mexico, but unfortunately short, is given by Chappe
D'Auteroche in his voyage to California, London,
1778, 8vo. Memoirs of the Jesuits concerning Cali-
fornia, 3 vols. 4to. Madrid, 1757. California by
Venegas, Lond. 2 vols. 8vo. Viage de 1792, Mad.
1802, 4to. Noticias Americanas, by Ulloa, 1772, or
Mad. 1801, 8vo. Cardenas, Historia de la Florida.
Alcedo's Dictionary. 5 vols. 4to. Above all the
Viagero Universal, Mad. 1798, &c. 44 vols. 8vo.

British Possessions.

Arrowsmith's map of North America. Smith's
Upper Canada, 1 sh. 1800.

The Travels of Hearne and Mackenzie, Lahontan,
Charlevoix, Weld, &c.

* For a catalogue of all the Spanish books of voyages and travels,
the reader is referred to the Biblioteca Occidental, Nautica y Geogra-
fica de Pineda, añadida por el dignor Barcin, 3 vols. folio.

Native

Native Tribes.

Colden's Five Nations. Lafitau's Manners of the Savages, but the figures do not represent the people; and the descriptions are not of unimpeached accuracy. Charlevoix, Du Pratz. Greenland by Egede, or Crantz. Travels by Carver, Hearne, and Mackenzie, &c. Adair's History of the American Indians contains a few curious facts, distorted by an absurd system.

North American Islands or West Indies.

Large maps as we had of the most of the islands. The West Indies by Jefferys, 16 sh. Reduced 1 sh. Bolton's maps in Potlethwayte's Dictionary, and those in the History of the West Indies by Mr. Edwards. West Indies by Arrowsmith.

Labat's Voyages to the West Indies, 6 tomes, 8vo. There are detached French voyages to several of their islands; but the accounts of the Spanish are, as usual, antiquated. Among the English are Ligon's Barbadoes. Sloane's Jamaica. Jefferys has published an account of the Spanish Islands, with 32 maps and plans, London, 1762, 4to. The best account of the British is that by Edwards. Raynal's work is sunk into disesteem, and is said by Mr. Edwards to have no more truth than Robinson Crusoe. He was one of the new French philosophers, who affect to be learned by special inspiration.

SOUTH AMERICA.

The map of La Cruz, engraved at Madrid for royal presents, 1775, and published at London, by Mr. Faden, 1799, 6 sh. (but very incorrectly) the best yet given. Bauza's map, 4 sh. is eagerly expected. Maps of some of the provinces are among the works of Lopez, but as usual of little accuracy. The environs of Quito, where the degree was measured, may be found in Bouguer, or in the French edition of Ulloa. In 1750, D'Anville published the province of Quito, 4 sh. But La Cruz must be preferred, though by a ridiculous failure he have omitted to denote in a proper manner the great chain of the Andes, and the other ridges; there are also some political disguises. In 1774 Falkner, who had been a missionary, published a map of Patagonia in 2 sh. but it will be found very erroneous, when compared with La Cruz. The Rio de la Plata, and some other portions, are also published apart; and our assiento and contraband trade has contributed to improve the geography.

Spanish Possessions.

The maps above mentioned. Peru from the astronomical observations of Condamine, &c. Paris, 1 sh. Malepina's Survey of the coast, from the Rio de Plata to Panama, S. and W. 5. sh. excellent. Chili by Ouala, 6 sh. 1650, curious.

The voyage of Ulloa. The best translation is the French, 2 vols. 4to, for in the English, 2 vols. 8vo. many important tables, &c. are omitted, and the prints

so miserably reduced that they are alike useless and unpleasant. Voyage de Condamine. Lettre de Monsieur Godin, (Voy. de Cond. ed. 1778). Bouguer, Figure de la Terre, for an excellent account of Peru. Dobrizhoffer, &c. &c. Wafer's description of the Isthmus of Darien, 1699. Voyage de Frezier, 1717, 2 tomes, 12mo. Gily Storia de Terra Firma, 4 vols. Rome, 1780. Vidaurre Compendio del Chili, Bologna, 1776, 8vo. Viage al estrecho de Magallanes de orden de S. M. 4to. Molina Storia Naturale del Chili, Bologna, 1782, 8vo. Storia Civile del Chili, Bologna, 1787, 8vo. both excellent.

Portuguese.

The Portuguese are the most illiterate of European nations, and the accounts of their settlements in America and Africa obsolete and imperfect. Even the geography of their own country is a mass of errors; and if they have any maps of Brazil, they are without the smallest claim to common accuracy or reputation. Blauw published a map of Brazil, when a great part was possessed by the Dutch. The Spanish map of La Cruz is the best modern authority, though here D'Auville seem copied. In Bougainville's voyage to the Falkland Islands there are some local maps and plans.

The Voyage of Bougainville; Sir George Staunton's Account of the Embassy to China; with the works of Faria translated by Stevens; Oforio; Barros the Portuguese Livy, &c. &c.

French.

French maps of Cayenne may be compared with La Cruz; but the wide debated lands are now resigned to the French, with a yet further extension of territory towards the river Maranon.

The Voyage of Des Marchais published by Labat, 4 vols. with a map by D'Anville; and many recent voyages, &c. &c.

Dutch.

There is a detached and rare, but coarse, chart of the shores and rivers, printed at Amsterdam: with several English charts of the river Surinam by Walker, 4 sh. &c. Guiana by Captain Thomson, 1783, 1 sh.

Bancroft's Natural History of Guiana. Stedman's Surinam, &c.

* Lafitau's History of the Discoveries and Conquests of the Portuguese in the New World, Paris, 1733, 2 vol. 4to. or 4 12mo. ends with 1680, when Portugal became subject to Spain. It would have been valuable, as Robertson, in his History of America, has wholly omitted the Portuguese settlements, but the title is grossly erroneous, as the work is restricted to the Portuguese establishments in Hindostan, and is arranged according to the series of governors of Goa, with some slight references to African affairs; nor is Brazil perhaps once mentioned in this history of Portuguese transactions, *dans le nouveau monde*, to use the words in the title, by a potent error, which seems to evince that a man may be a Jesuit and yet want common sense.

Native

Native Tribes.

The map of La Cruz. History of Paraguay by Charlevoix. Gumilla's Orinoco, Mad. 1745, 2 vols. 4to. Dobrizhoffer de Abiponibus, Vienna, 1784. Molina's Chili, &c.

Islands connected with South America.

Ulloa's Voyage. Bougainville's Voyage to the Falkland Islands. Cook's Voyages, &c.

AFRICA.

The map of D'Anville, 1749, 3 sh. is still the best excepting the parts explored by Park and Browne, and may be compared with that of Delisle. That published by Wilkinson, 1800, 4 sh. is decent, but there are several errors, and some mistaken applications of ancient geography. The detached maps by Rennell may be consulted. In Saugnier's voyage, 1792, there is a French map which may afford some hints, but there are many mistakes. The maps in Shaw's work are singularly confused, from the mixture of Latin and Arabian names, but deserve to be re-engraved with improvements. That in Lempriere's Morocco seems tolerably exact, and from it some important positions, as the city of Morocco, the chief ridge of Atlas, &c. may be collected.

Africa by Hafius, 1737, 1 sh. By Robert, 1760, 4 sh. By Gendron, Madrid, 1754, 1 sh.

Abyssinia.

The map in Bruce's Travels may be compared with those of Tellez, that of Ludolf, and the Africa of D'Anville.

The Travels of Alvarez, 1520. Those of Lobo, 1625, translated by Dr. Johnson. The account of Abyssinia by Tellez, Lisbon, 1660, folio. Ludolf's Ethiopia, 2 vols. folio. Poncet's Journey, 12mo or in Lockman's Travels of the Jesuits, 2 vols. 8vo. Bruce's Travels, 5 vols. 4to.

Egypt.

The Map of D'Anville, and Memoir. The Delta by Niebuhr, &c. Lower Egypt, &c. by La Rochette, 1802, 1 sh.

Travels of Pococke, Norden *, Niebuhr, Browne. The late French accounts. Volney, Savary, De Non.

Mahometan States.

The maps of Shaw, for Algiers and Tunis. The general maps and Lempriere, for the others. Fez and Morocco, after Tosno, Hoeft, and Lempriere, by Canzler, 1797. Mediterranean, 4 sh. 1785, Faden.

* There is a French edition, 1800, 4to.

Shaw's Travels in Barbary, or rather in Algiers and Tunis; the best edition is the 4to. The travels of Poiret are trifling, and Chenier's book a feeble compilation. Lempriere, good. Hoeft, 1759, in Danish or German, good. Agrell in Swedish, 1800. For Tripoli, Bruce, and the publications of the African Society may be consulted. The curious reader may look into Addison's West Barbary, 1671, or Ockey's, 1713. In general Dr. Dapper's Account of Africa, or Ogilby's translation, may still be used with advantage, as there are few more recent accounts of several countries, whence their labours in this portion alone of the globe are not wholly superannuated †. Sanson published at Paris a description of Africa, 1656, 1660, 4to. with several maps.

Western Coast.

There are old maps of Congo, &c. in the account of Lopez or Pigafetta, Mandellso, Dapper, Cavazzi, &c. and small detached maps by D'Anville, 1731. Of the river of Congo or Zahir there is a chart by Maxwell, 2 sh.

A description of Congo by Lopez, or rather by Philip Pigafetta from the papers of Lopez, was originally published in Italian, Rome, 1591, 4to. whence it was translated into English by Hartwell, 1597, 4to. in Latin it forms the first part of the Smaller Voyages of De Bry, 1598, folio, and there is an appendix by Bruno, 1625, folio.

Descrizione Ithorica dell' tre Regni, Congo, Matamba, & Angola, compilata dal P. Gio. Ant. Cavazzi. Bologna, 1687, folio, pp. 933, large print, with plates; or Milan, 1690, 4to. This curious work was translated by Labat in his *Ethiopie Occidentale*, Paris, 5 tomes, 12mo. which must not be confounded with the *Afrique Occidentale* of that voluminous compiler. In 1776 Proyart published at Paris his History of Loango, from papers of French missionaries 1766, with a new but imperfect map, a curious and interesting work *.

Labat's Collection. Bosman's Guinea. Norris's Account of Dahomey. Park's Travels. Adanson's Senegal,

The Cape.

The Survey by Barrow. The Travels of De la Caille, Paterfon, Sparman, Barrow, &c. As repeated falsehoods have been detected in Vaillant's books, especially the last journey, they are chiefly to be read for amusement.

† Dapper's African Islands were published, 1668, and his Africa, 1670, in Dutch. The plates are used by Ogilby, 1671; and much worn in the French translation, 1686. Sanson's Africa has some curious maps.

* See also Zucchelli's Account of the Mission in Congo, published about 1712. Angelo's Voyage to Congo, 1665, is in Labat's tome v.

The Eastern Coast.

There is a small map by D'Anville, called *Ethiopie Occidentale*, which comprises Mocaranga, and other dominions of the Monomotapa or emperor, 1732; and in Lobo's *Abyssinia* by Le Grand, 1728, 4to.; but of these singular and interesting countries the geography and descriptions are alike imperfect, nor is there even a missionary modern account of Mocaranga, Sofala, Sabia, &c.†. The letters of the Jesuits probably present some materials; but Lockman's is an injudicious compilation, often containing the most trivial matters. The Dutch and German Voyages of Bucquoy 1771, and Thoman 1788, may be consulted.

Madagascar.

Flacourt has published a map: and Rochon has been contented with one of 1727. Bellin has given a large map. There are several French accounts, Rochon's being one of the latest.

African Islands.

General map. There are detached maps of the Isles of Bourbon and Mauritius, &c. Canaries by Fleureau, 1 sh.

Rochon's Madagascar. Grant's Mauritius, &c. For Kerguelen's Land, Cook's last voyage. Glas's Canary Islands, &c. For the Azores, see Portugal, as they strictly belong to Europe.

HYDROGRAPHY.

THOUGH charts be not considered as essential in the study of geography, yet as a few of islands, &c. are admitted into collections of maps, it may not be improper to offer some hints on the subject. In a large or public library indeed the best charts should appear as well as the best maps. But in general the chief purchasers of charts are merchants for their counting houses; and captains and other marine officers, who procure the most recent and authentic adapted to the voyage. Such are often bound up together, in the form of a narrow oblong folio, and are styled Neptunes, Pilots, &c. Thus the East India Pilot contains more than a hundred charts for a voyage to the East Indies, or even to China, including detached charts of the isles, coasts, and harbours, which may be visited from choice or necessity. In like manner the African Pilot presents charts necessary for a voyage to the Cape: and there are Pilots for the British coasts, the Baltic, Mediterranean, West Indies, &c. Each chart may also commonly be had apart, and is often accompanied with Sailing Directions, as well as the Neptunes and Pilots, in a detached octavo form. The Dutch are careless naviga-

tors; and the best charts are the English and French. Yet the Dutch, in the sixteenth century, seem to have been the first inventors of the collections called Neptunes, Flambeaux, Colonnes de la Mer, &c.*.

The most celebrated French name is that of M. D'Après de Manneville, whose *Neptune Oriental* or Survey of the Indian Ocean, &c. is highly and deservedly esteemed by all seamen. The charts of Bellin, Engineer of the French Marine, 1737—1767, chiefly relate to the Atlantic, and their estimation is principally confined to France. His *Neptune General* fills 2 or 3 thick folio volumes. Bellin also published a small maritime atlas, in 5 vols. and a separate description of Guiana and its shores. His *Neptune Français* presents the coasts of France, Spain, England, Holland, &c.†.

In England the Neptunes and Pilots are always composed of detached charts, by various authors and observers. Mr. Dalrymple, in his zeal to promote geography and navigation, has published a prodigious number, perhaps a thousand, detached charts of isles, harbours, coasts, straits, shoals, &c. chiefly in the Oriental world. Among other works may be mentioned the American Coasts, or Atlantic Neptune, by Des Barres, 1776, (too full of neology;) the various Pilots published by Mount and Davidson; Murdock's Atlantic Ocean, published by Faden; Mackenzie's Charts of the Shores of Scotland and Ireland; Huddart's Chart of the Western Isles, Captain Ross Donnelly's of Ferroe, the Orkneys, Shetland, &c. 1797, which may be compared with Lowenorn's Chart of the Shetland Isles, 1787. Of the English coasts there are various charts, and it might be rash to indicate a preference. For the present purpose it will be sufficient to commemorate a few others.

Arrowsmith's Chart of the Pacific, 9 sh. and of the Asiatic Islands, 4 sh. The Indian Ocean, 4 sh. The South Sea Pilot, 28 sh.

Mr. Faden has also published several charts of great reputation as:

Parts of the Baltic 1802, from Nordenanker and Wybe. Gulf of Finland, by Captain Goff, 1785, 4 sh. Gulf of Florida; Windward Passage; Malepina's Coast of S. America, 1802; Gulf of St. Lawrence, 4 sh. Coasts of Labrador and Newfoundland, by Lane; Bay of Breff, &c. 1802: with several by La Rochette, drawn from the best materials.

Some valuable charts have been published by Laurie and Whittle, successors to Mr. Sayer; and by others, such as Steel, Moor, Mount and Davidson, Gilbert, Heather, &c. whose reputation can only be justly estimated by seafaring men. Even in a small collection the charts of several islands, as the Azores, the Bermudas, the Canaries, &c. &c. will be found interesting.

* The hydrographic work of Dudley Duke of Northumberland, Florence, 1647, vols. fol. is not only curious but of some value.

† Le Grand, in his dissertations annexed to Lobo's *Abyssinia*, (p. 269, Johnson's tr.) quotes *Les Santos Ethiopia Orientale*, Evora, 1609, of which there is a French translation, Paris, 1624, 12mo.

† There is also a *Hydrographie Française* lately compiled by Desauchoe, one of the chief vendors of charts at Paris, and which contains recent French charts of most parts of the world. The grand atlas of the Baltic by Fleureau is not yet published.

The coasts of Spain, published at Madrid, 1798, by Tosino, may be considered as an accession to European geography; and the same astronomer has given charts of some parts of Barbary.*

These hints may suffice for the geographical student; but it may be added, under this department, that there are several voyages, chiefly published in France, professedly undertaken for the purpose of improving astronomy and geography: such are the Voyages of Bouguer, 1749; Chabart, 1753; Courtanvaux, 1768; Cassini, 1770†; but particularly the *Voyage par ordre du Roi*, by De la Crenne, Borda, and Pingré, Paris, 1778, 2 vols. 4to. abounding with important observations, which have radically improved the geography of several countries. The Voyage of Kerguelen to Iceland, Greenland, Shetland, Norway, &c. Paris, 1771, or Amst. 1772, 4to. may also be mentioned in this class.

It is to be wished that travellers, instead of overwhelming us with ridiculous voyages to the Levant, would examine the geography of such countries as are little known, in which case they would contribute infinitely more to the stores of modern knowledge.

These few observations on hydrography may be considered as introductory to a brief list of the circumnavigations, and more general voyages, which cannot well be arranged under particular countries.

The Voyage of Magalhaens round the World was the first, for it would be ungenerous to deny the title, because that great navigator was slain in the Philippines. Pigafetta, who accompanied Magalhaens, drew up an account of this memorable voyage in Italian, which has recently been published in a splendid manner. But for general use the French translation, Paris, an. 9, 8vo. will be found interesting.

The Voyages of Sir Francis Drake, London, 1633, 4to.

Dampier's Voyages round the World, London, 1729, 4 vols. 8vo. including Wager's Voyage.

* The Madrid Gazette, 29 April 1803, gives a catalogue of the charts published by the board of Hydrography at Madrid, and presents some new observations of longitudes and latitudes. *Waldenauer*.

† There is also a journey to Germany by the same author to examine the geography of the Palatinate, &c. Paris, 1776, 4to.

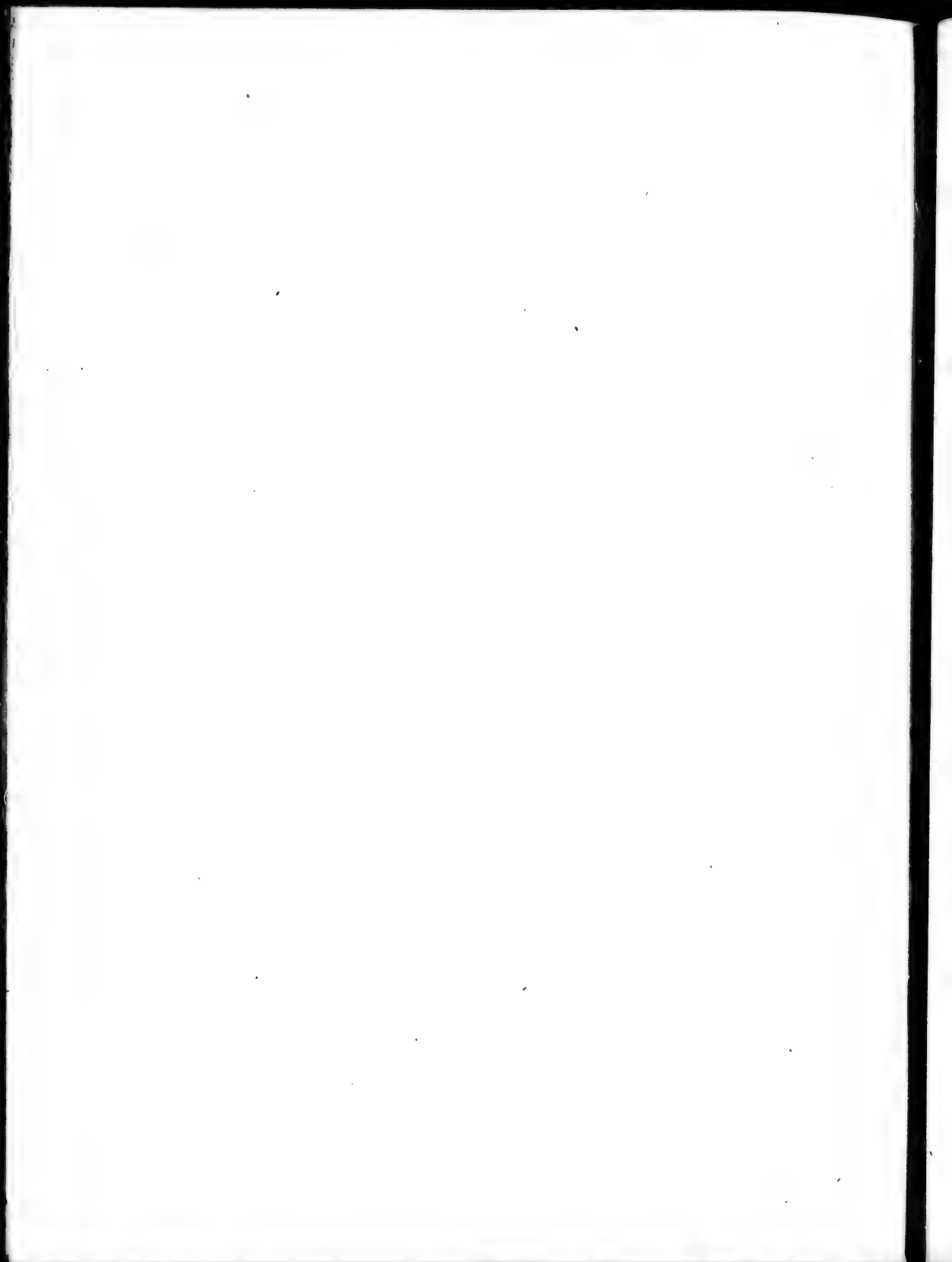
Granelli Carreri's Voyage round the World, Naples, 1699, 6 vols. He was a lawyer, and left his country from some domestic uneasiness. That he really performed this voyage seems now admitted; but the book is trifling, and a voyage round the world is no longer a matter of wonder.

Anson's Voyage round the World.

Cook's Voyages, with those of Dixon, Portlock, Vancouver, Bougainville, La Perouse, &c.

To enumerate the collections of voyages would be infinite. The French *Histoire Generale des Voyages* is more amusing than accurate, and cannot admit of quotation or reference, as the originals must be consulted. The *Novus Orbis* of Crynæus is the oldest collection; which was followed by those of Ramusio, Hakluyt, and Purchas. Bergeron's curious collection appeared 1630, &c. 8vo.; reprinted at Leyden, 1742, 2 vols. 4to. In 1663 Thevenot published his first volume, which was followed by three others. Ray's Collection, 1641, 8vo*. Harris's Collection appeared in 1705, 2 vols. fol. being a good general history of voyages: it was afterwards improved by Dr. Campbell, 2 vols. fol. 1744, 1748. Stevens's Collection of Translations, 2 vols. 4to. 1711. Voyages from the Harleian Library, 2 vols. fol. 1745. Churchill's Collection, 6 vols. fol. 1752, new edit. Astley's Collection, 4 thick vols. in 4to. rare and valuable, 1745; the editor is called Green in some catalogues, certainly a man of great learning and industry, but of no judgment nor skill in arrangement. De Brosse's *Navigations aux Terres Australes*, Paris, 1756, 2 vols. 4to. translated by Cailander, Edin. 1766, 3 vols. 8vo. There are several modern English collections; by Salmon, 2 vols. fol. 1755. Guthrie, 7 vols. 8vo. 1767, &c. &c. Those by Hawkefworth and Dalrymple are in superior estimation. In German is the *Sammlung*, &c. a collection of the best and newest travels, Berlin, 1765—1782, 23 vols. large 8vo.

* Dufresnoy mentions a collection, London, 1674, 4 vols. fol. and one, 1704, (Churchill's) 8 vols. fol. with a preface by Locke.



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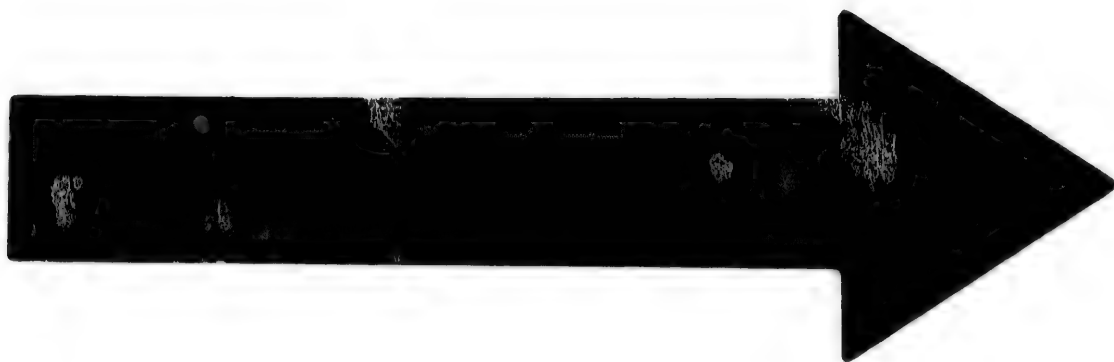
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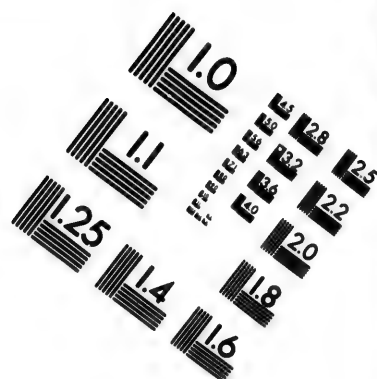
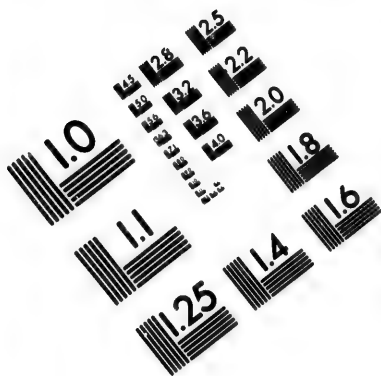
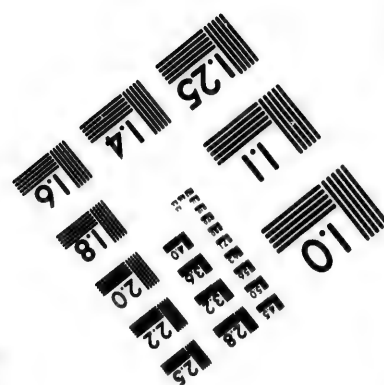
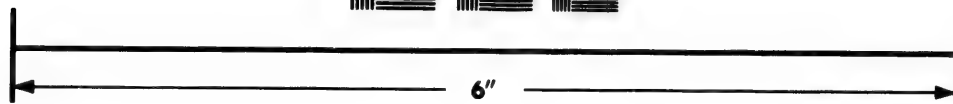
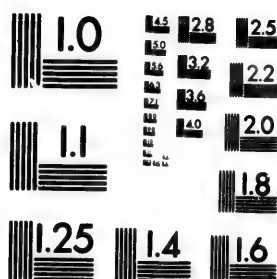


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